yellow

ac.

CURTIS'S
BOTANICAL MAGAZINE;

OR

Flower Garden Displayed:

In which the most Ornamental FOREIGN PLANTS cultivated in the Open Ground,
the Green-House, and the Stove, are accurately represented and coloured.

To which are added,

THEIR NAMES, CLASS, ORDER, GENERIC AND SPECIFIC CHARACTERS,
ACCORDING TO THE SYSTEM OF LINNÆUS;

Their Places of Growth, Times of Flowering, and most approved
Methods of Culture.

CONDUCTED

By SAMUEL CURTIS, F. L. S.

THE DESCRIPTIONS

By WILLIAM JACKSON HOOKER, L. L. D.
F. R. A. and L. S. and Regius Professor of Botany in the University
of Glasgow.

VOL. VI.

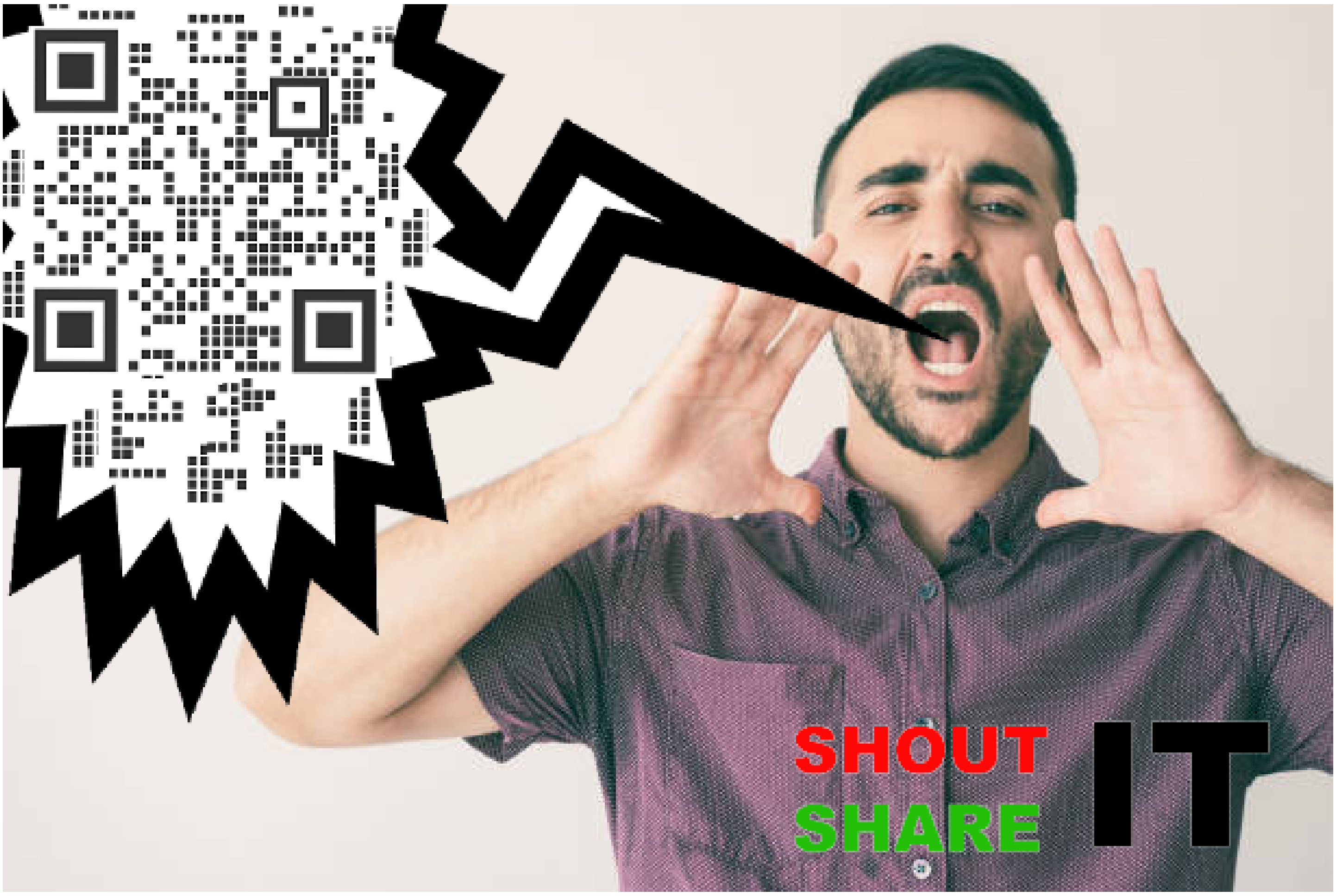
OF THE NEW SERIES;

Or Vol. LIX. of the whole Work.

> "Here may the flowers display their sweets,
> And, gay, their silken leaves unfold,
> As fearless of the noontide heats
> As careless of the Winter's cold."

LONDON:
Printed by Edward Couchman, 10, Throgmorton Street;
FOR THE PROPRIETOR, SAMUEL CURTIS,
AT THE
BOTANICAL MAGAZINE WAREHOUSE, GLAZENWOOD, NEAR COGGESHALL, ESSEX:
Also by Sherwood, Gilbert, & Piper, 23, Paternoster Row; J. & A. Arch, Cornhill; Treuttel, & Wurtz,
Soho Square; Blackwood, Edinburgh; and in Holland, of Mr. Gt. Eldering, Florist, at Haarlem:
And to be had of all Booksellers in Town and Country.
1832.

pls 3123- 3205


SHOUT
SHARE
IT

TO

THE RIGHT HONORABLE

LORD VISCOUNT MILTON, &c. &c.

WHOSE RICHLY STORED GARDENS OF WENTWORTH

HAVE FURNISHED

SOME OF THE BRIGHTEST ORNAMENTS OF THIS WORK,

THE PRESENT VOLUME

IS DEDICATED,

WITH SENTIMENTS OF THE HIGHEST REGARD

AND ESTEEM,

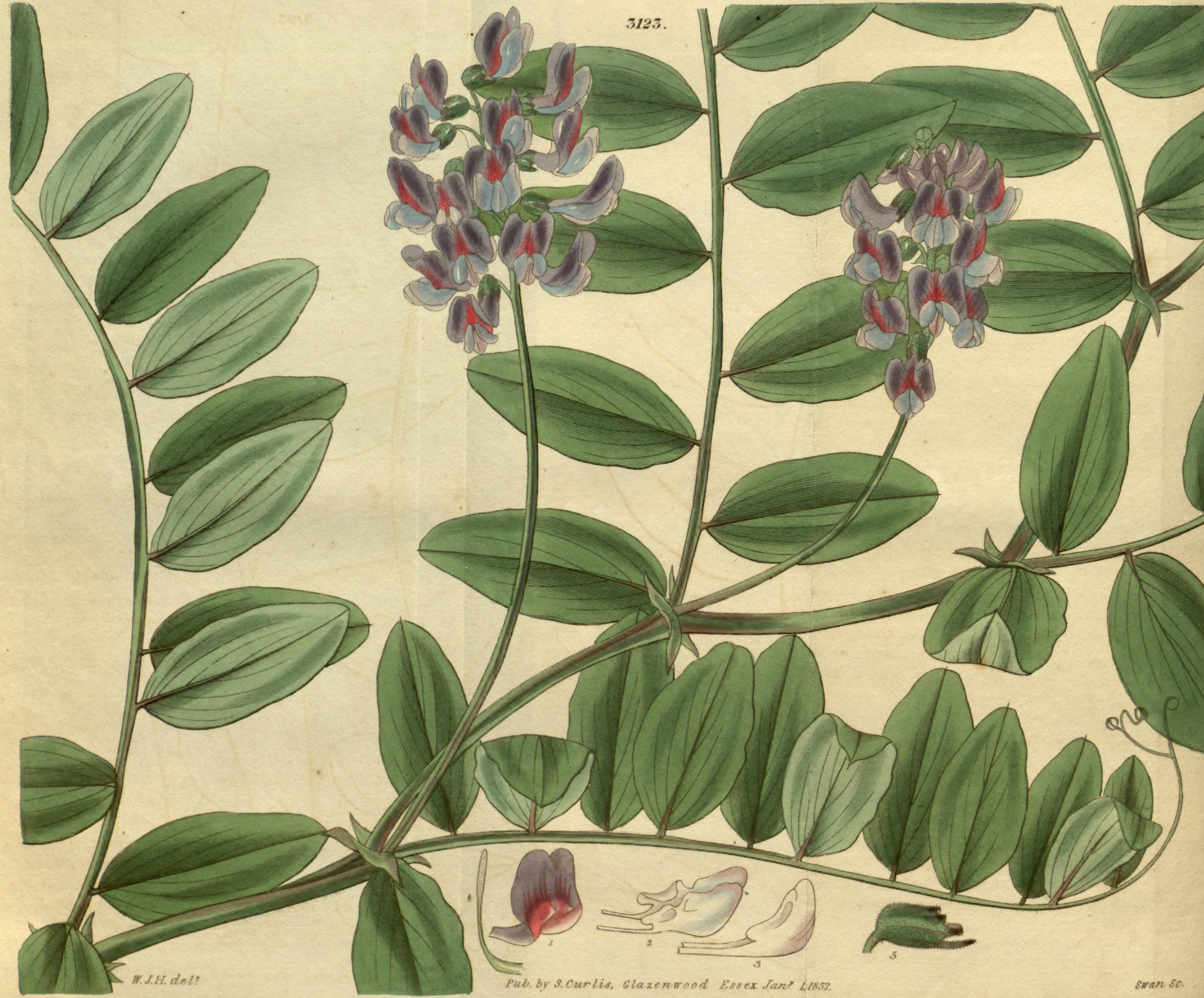
BY HIS OBLIGED

AND VERY OBEDIENT HUMBLE SRRVANT,

W. J. HOOKER.

GLASGOW, Dec. 1, 1832.

3123.



W.J.H. del.ᵗ

Pub. by S. Curtis, Glazenwood Essex Janʸ 1. 1832.

Swan Sc.

(3123)

LATHYRUS DECAPHYLLUS. TEN-LEAFLETTED EVERLASTING PEA.

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. campanulatus 5-fidus, lobis 2 superioribus brevioribus. *Cor.* papilionacea. *Stam.* diadelpha. *Stylus* complanatus, apice dilatatus, antice villosus aut pubescens. *Legumen* oblongum, polyspermum, bivalve, 1-loc. *Semina* globosa aut angulata. *De Cand.*

Specific Character and Synonyms.

LATHYRUS* *decaphyllus ;* glabriusculus, caule acute angulato, foliolis 8—12 elliptico-ovatis suboblongisve, stipulis parvis lanceolatis utrinque acuminatis, pedunculis folii longitudine multifloris, calyce dense pubescente dentibus 2 superioribus valde abbreviatis, (corollis purpureis.)

LATHYRUS decaphyllus. *Pursh, Fl. Am. v. 2. p.* 471. *Hook. Fl. Bor. Am. v.* 1. *p.* 159.

DESCR. *Stem* three feet and more long, procumbent, or climbing among bushes, rather stout, downy, somewhat geniculated, acutely three or four-angled and striated, purplish-green. *Leaves* a span long, pinnated with from eight to twelve ovato-elliptical, or sometimes approaching to oblong, alternate, remote, and shortly petiolated *leaflets,* mucronated at the point, somewhat nerved, and obscurely reticulated, bright yellow-green and nearly glabrous above, paler, almost glaucous and downy when seen through a lens, beneath. *Rachis* angular, terminated by a branched tendril. The *stipules* may be said to be half arrow-shaped, with the lobe deflexed, and equal in size to the stipule, in other words, to be composed of two equal, acuminated, divaricating lobes: the length about three-fourths of an inch. *Peduncles* about as long as the leaves, angular and striated, slightly downy, terminated by an unilaterally and very beautiful many-flowered *raceme*. *Pedicels* curved, downy. *Calyx* reddish-purple, very downy, obscurely ribbed, the two upper teeth very short, the lowermost one the longest. *Vexillum* bright red-purple, becoming paler and more blue in age; above the claw are two obtuse teeth, and the border is minutely, but delicately reticulated with red. *Alæ* oblong, the upper margin complicated, and folding into some depressions of the carina so as to adhere rather firmly to it, pale purplish; *carina* obtuse, almost white. *Filaments* in two sets. *Style* linear, a little dilated upwards, and there downy above.

---

* In Greek λαθυρος, the name of a Leguminose plant in Theophrastus.

In the "Flora Boreali-Americana" I have described this plant, which is found, both by Dr. RICHARDSON and Mr. DRUMMOND, on the banks of the Saskatchawan river, in N. lat. 52°—53°, and by Mr. DOUGLAS, in North-West America, as the L. *decaphyllus* of Mr. PURSH, a native of the Missouri, and from whose description it only differs in the greater number of flowers in a raceme. These flowers are rather large, forming a dense, almost capitate raceme, before expansion of a bright red colour, gradually becoming purple as they open, and fading away in age to a rather dingy blue. Our plant was raised from seeds brought home by Mr. DRUMMOND and Dr. RICHARDSON, in the garden of P. NEILL, Esq. and it flowered for the first time in June, 1831.

It is a highly ornamental species, and well merits a place in every flower-border.

Fig. 1. Vexillum. 2. Alæ. 3. Carina. 4. Style. 5. Calyx:—*magnified*.

31

W.J.H. del.

Pub. by S. Curtis, Glazenwood Essex Jan.y 1, 1832.

Swan

G. Richardsonii.

(3124)

GERANIUM ALBIFLORUM. WHITE-FLOWERED CRANE'S BILL.

Class and Order.

MONADELPHIA DECANDRIA.

(Nat. Ord.—GERANIACEÆ.)

Generic Character.

Sepala 5 æqualia. *Pet.* 5 æqualia. *Stam.* 10 fertilia alterna majora. *Glandulæ* nectariferæ ad basin stam. majorum. *Carpellorum aristæ* intus glabræ, demum elasticæ, a basi ad axios apicem circinnatim revolutæ.—Herbæ *rarissime suffrutescentes, foliis palmato-lobatis, pedunculis 1—2-floris. De Cand.*

Specific Character and Synonym.

GERANIUM * *albiflorum ;* caule terete erecto dichotomo inferne glabro superne glanduloso-piloso, foliis profunde 5-partitis, laciniis ovato-acuminatis inciso-subpinnatifidis subpilosis, radicalibus longe petiolatis superioribus oppositis breve petiolatis 3-partitis magis acuminatis, calycibus glanduloso-pilosis, petalis integris (albis) intus filamentisque basi hirsutis.

GERANIUM albiflorum. *Hook. Fl. Bor. Am. v.* 1. *p.* 116. *t.* 40. *Graham in Ed. N. Phil. Journ. June,* 1831.

DESCR. This is a perennial plant, with herbaceous, erect *stems,* a foot and a half or two feet high, rounded, simple and glabrous below, upwards dichotomously branched and downy. *Leaves* almost entirely glabrous, the lower ones upon very long stalks, palmatedly five-partite, the lobes ovato-acuminate, cut and laciniated in a pinnatifid manner :

---

* From γερανος *a crane ;* whose beak the seed-vessel somewhat resembles.

manner: those of the stem are gradually smaller upwards, on shorter stalks, three-partite, more acuminated and incised. *Peduncles* elongated, downy, and glandular, two-flowered, and, as well as the pedicels, bracteated at the base. *Calyx* of five oblong, glandular leaves, tipped with a long, soft mucro. *Petals* obovate, longer than the calyx, tapering into a short unguis, milk-white, veined, hairy and ciliated below. *Stamens* with hairy glands on the lower parts of their *filaments,* which are reddish-purple. *Anthers* bluish-purple. *Stigmas* yellow-green.

The gardens, both of Edinburgh and Glasgow, are indebted for the possession of this plant to the exertions of Mr. DRUMMOND, who brought home seeds of it from the vallies of the Rocky Mountains of North America, in lat. 52°—54°.

In habit and general appearance it approaches, on the one hand, the European G. *pratense,* and on the other, the N. American G. *maculatum,* differing in the characters above given, and in the colour of the flowers, which are constantly white.

It blossoms copiously during the summer months, and increases readily by its roots.

Fig. 1. Petal. 2. Stamen and Gland:—*magnified.*

W.J.H. del^t

Pub. by S. Curtis, Glazenwood Essex Jan^y 1 1832.

(3125)

CEREUS ROYENI. VAN ROYEN'S CEREUS.

= Cereus Curtisii, Otto. – vide Kew.

* * *

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—CACTEÆ.)

Generic Character.

Sepala numerosissima imbricata basi ovario adnata, in tubum elongatum concreta, exteriora breviora calycinalia, media longiora colorata, intima petaliformia. *Stamina* numerosissima cum tubo concreta. *Stylus* filiformis apice multifidus. *Bacca* sepalorum reliquiis areolata tuberculosa aut squamata. *Cotyledones* nullæ ?—Frutices *carnosi elongati axi ligneo interne medullifero donati, angulis verticalibus spinarum fasciculos gerentibus regulariter sulcati.* Anguli *seu* alæ *nunc plurimæ, nunc paucissimæ, rarius duæ tantum et tunc rami compresso-alati.* Flores *ampli e spinarum fasciculis aut crenis angulorum orti. D C.*

Specific Character and Synonyms.

CEREUS[*] *Royeni ;* erectus simplex continuus 9—10-angulatus, angulis acutiusculis, spinis fasciculatis 6—8 aciculiformibus fuscis junioribus lana laxa paulo longioribus, tubo florali brevi crassa inermi, lobis exterioribus parvis viridi-purpureis, interioribus roseis omnibus subacutis.

CEREUS Royeni. *Haw. Syn. p.* 182. *De Cand. Prodr. v.* 3. *p.* 466.

CACTUS Royeni. *Linn. Sp. Pl. p.* 688. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 177.

DESCR. With us, this plant has attained a height of about three feet and a half, and a diameter of an inch and

a

---

[*] From the Latin word *Cereus,* signifying *pliant,* which many of the species are.

a half or two inches, erect, straight, or somewhat flexuose, of nearly the same width throughout, obtuse at the extremity, marked with eight to ten prominent, rather acute angles or ridges, which are beset with little tufts of rather long, lax, and deciduous wool, whence arises a spreading (or when young erect) cluster of dingy brown, long, slender, and sharp aculei, some of them nearly an inch in length, longer than the wool. From a tuft of this description (the woolly substance being increased in quantity, and rising one above another in each successive season,) springs a *flower,* large, indeed, in proportion to the size of the plant, but not remarkable for the beauty of its colour. The *tube* is about two inches long and three-fourths of an inch thick, of an olive green colour, glabrous and unarmed, expanding upwards into many imbricated, fleshy scales or segments, which are ovate and acute, often tinged with rose colour. These may be considered as constituting the *calyx:* for within is a series of ovate, pale rose-coloured *petals,* shorter than the calyx. *Stamens* numerous, shorter than the corolla. *Anthers* linear-oblong, pale yellowish-white. *Style* exserted, white, jointed near the base, and deep rose coloured below the joint. *Stigma* of about seven or eight rays, which are erect, or connivent, white.

The difficulty of determining the various species of the CACTUS tribe, is well known to those who have had occasion to study them. In the present instance, we have given a plate of an individual, which certainly, in description, is so little at variance with the CEREUS *Royeni,* that I am inclined to think it is that species: although the exterior scales of the flower are not *acuminated,* as DE CANDOLLE describes them to be; nor are the petals white, but rose-coloured.

Our specimens were obligingly communicated to the Glasgow Botanic Garden by —— RYBURN, Esq. of this place, who received them from Mr. SWAPP of Grenada. Our tallest plant, three feet and more in height, flowers readily in the spring and summer. We possess a very similar plant from Trinidad, whence it was sent by the late Baron de SHACK: but it has considerably shorter spines, and is, probably, the CEREUS *lanuginosus* of Mr. HAWORTH (CACTUS *lanuginosus.* LINN.)

Fig. 1. Flower: *nat. size.* 2. Anther: *magnified.* 3. Style and Section of the Germen: *nat. size.* 4. Stigma: *magnified.* 5. Tuft of Spines and Wool: *nat. size.*

W. J. H. del.

Pub by S. Curtis. Glazenwood Essex Jan 1 1832

Swan

(3126)

ERIOCAULON DECANGULARE. TEN-ANGLED PIPE-WORT.

****

Class and Order.

MONŒCIA TETRANDRIA.

(Nat. Ord.—RESTIACEÆ.)

Generic Character.

Capitulum androgynum : squamis unifloris, extimis sæpius vacuis involucrantibus. *Perianthium* duplici serie 4—6-phyllum.—MASC. in disco capituli. *Perianthium* foliolis interioribus infra connatis altiusve insertis. *Stamina* 4—6. *Antheræ* biloculares.—FŒM. in ambitu capituli. *Perianthium* foliolis interioribus distinctis. *Stylus* 1. *Stigmata* 2—3. *Capsula* 2—3-locularis, 2—3-loba, angulis salientibus dehiscens. *Semina* solitaria. *Br.*

Specific Character and Synonyms.

ERIOCAULON * *decangulare ;* scapo elato longe vaginato 10—12-angulato, foliis subulato-ensiformibus canaliculatis glabris, capitulo magno depresso-globoso, squamis exterioribus ovatis nitidis apice hirsutis interioribus linearibus hirsutissimis, perianthii foliolis 4 apice villosis.

ERIOCAULON decangulare. *Linn. Sp. Pl. p.* 485. *Mich. Fl. Am. Bor. v.* 1. *p.* 165. *Pursh, Fl. Am. v.* 1. *p.* 91. *Elliott, Carol. v.* 2. *p.* 565. *Loddiges, Bot. Cab. t.* 1310. *Willd. Sp. Pl. v.* 1. *p.* 486. *Roem. et Sch. Syst. Veget. v.* 2. *p.* 864. *Spreng. Syst. Veg. v.* 3. *p.* 775.

ERIOCAULON decemangulare. *Humb. et Kunth, Nov. Gen. Am. v.* 1. *p.* 254.

ERIOCAULON serotinum. *Lam. Encycl. v.* 3. *p.* 176. *(fide Poiret.)*

ERIOCAULON Novaboracens. *Pluken. Amalth. t.* 409. *f.* 5.

---

* Named from εριον, *wool,* and καυλος, *the stem,* in allusion to the downy stems or scapes of the species first known.

Descr. Perennial. *Leaves* all radical, a span or more long, half an inch broad, subulato-ensiform, pale green, somewhat shining, semipellucid, striated, and compactly cellular, the inner ones nearly erect, the outer ones patent or recurved. *Scape* one to three feet high, terete, with twelve (often spiral) striæ and as many obtuse angles between them; sheathed below with a *bractea*, which is nearly as long as the leaves, tubular, and spirally striated. *Head of Flowers* nearly three-fourths of an inch in diameter, forming a depressed globe, nearly hemispherical, woolly. Outer scales the largest, empty, ovate, acute, pale yellowish-brown, glossy: inner ones bearing flowers, linear, very hairy. *Male Flowers* in the disk, each a *perianth* of four leaves, the two outer and lower ones subconduplicate, carinate, hairy at the back and tip; the two inner ones united for the greater part of their length into an infundibuliform, glabrous *tube*, the two lips hairy, bearing each a black, sessile gland, and at the base two stamens on short filaments and two others from the sinus of the lips, one on each side. There are besides two glands at the base of these lips. *Filament* short, white. *Anther* 2-lobed, dark green. *Female Flowers* occupying the circumference. *Segments* of the *Perianth* free to their base, or nearly so; outer ones conduplicate; inner ones linear, spathulate, hairy at the extremities. *Pistil* on short stipes. *Germen* two-lobed. *Style* bifid. *Stigmas* subulate.

A native of North America, from Pennsylvania to Carolina and Virginia; and if Humboldt's E. *decemangulare* be the same, as is supposed by that author, of the tropical parts of South America likewise. Our Glasgow Garden is indebted to the Messrs. Loddiges for the species. It is, with us, cultivated in the stoves, in pots of peat-earth set into pans of water. Its flowers are produced in July and August, and upon scapes two and a half and three feet long.

Judging from the description, Michaux's E. *gnaphalodes* is very nearly allied to this; nor can I distinguish what I have received from the Southern States, under that name, from the present. Like our British Eriocaulon, (E. *septangulare)* it is liable to vary much in size.

Fig. 1. Section of the Scape. 2. Outer Scale of the Capitulum. 3. Inner Scale. 4. Male Flower. 5. Scale of a Female Flower. 6. Female Flower. 7. Pistil:—*magnified.*

[illegible] del.

Pub. by S. Curtis Glazenwood Essex. Jan. 1. 1832

VERBENA VENOSA. STRONG-NERVED VERVAIN.

* * *

Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—VERBENACEÆ.)

Generic Character.

Cal. 5-fidus, dente unico subbreviore. *Cor. limbus* irregulariter 5-lobus. *Stam.* inclusa. *Utriculus* 4-spermus, cito rumpens, ut maturi fructus caryopses sistant. *Spr.*

Specific Character and Synonyms.

VERBENA *venosa;* asperrima, caule acute tetragono, foliis oblongo-lanceolatis sessilibus basi latis subcordatis venosis grosse acutissimeque serratis, spicis terminalibus decussatim paniculatis, corollis calyce cylindraceo 4-plo (bractea 3-plo) longioribus.

VERBENA venosa. *Gill. et Hook. Bot. Misc. v.* 1. *p.* 167.

DESCR. This VERBENA, in the wild state, is about a foot in height, and decumbent at the base; in our stove, it rises nearly erect to a height of two to three feet. Its *stem* is rough, acutely quadrangular, but little branched. *Leaves* opposite, remote, rough, oblongo-lanceolate, sharply, coarsely, and unequally serrated, strongly marked with veins, which are immersed above, and prominent beneath, the apex acute, the base sessile, narrow in the lower leaves, in the rest broad and somewhat cordate. At the setting-on of the peduncles of the flowers, the leaves become lanceolate, or lanceolato-subulate, acute, entire *bracteas.* The *peduncles* themselves are opposite, three to four pairs placed in a sort of decussated *panicle,* having a terminal, nearly sessile *spike. Spikes* oblong, with rather closely imbricated, hairy, purple, subulate *bracteas*. *Flowers* flowering from below upwards in succession. *Calyx* shorter than the bractea and concealed by it, cylindrical, with five angles, and five, nearly equal, red teeth, hairy. *Corolla* rather large, rich purple. *Tube* three or four times as long as the calyx, curved, downy, purple ; *limb* in five broad, emarginate, almost bifid, purple segments, *mouth* slightly hairy. *Stamens* four, inserted below the middle of the tube : *Filaments* short : *Anthers* ovato-lanceolate. *Pistil* : *Germen* oval, glabrous. *Style* about half as long as the tube of the corolla. *Stigma* somewhat capitate, with a spur at its base. *Fruit* separating into four oblong *achenia*, on one of which the style for a time remains, and enveloped by the persistent calyx, which is closed at the mouth.

This is a very handsome species of VERBENA, in many respects allied to V. *Bonariensis*, differing in its much shorter spikes, and vastly larger flowers, which are of a bright purple colour.

It is a native of the Pampas of Buenos Ayres, whence seeds were sent by Dr. GILLIES, its discoverer, to Mr. NEILL, and to the Botanic Gardens of Edinburgh and Glasgow, where the plants have flowered readily in the greenhouse during the summer months. From a specimen kindly communicated by Mr. NEILL our figure was made.

Fig. 1. Leaf from the lower part of the Plant : *natural size*. 2. Flower and Bractea. 3. Stamens. 4. Pistil. 5. Fruit enclosed in the Calyx and with the Bractea. 6. Fruit, separating into four achenia : *magnified*.

3128.

W. J. H. del^t.

Pub by S. Curtis Glazenwood Essex Jan^y. 1 1832.

Swan

MICHAUXIA LÆVIGATA. SMOOTH MICHAUXIA.

* * *

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—CAMPANULACEÆ.)

Generic Character.

Cal. 8 (—10) -fidus, sinubus appendicibus obtectis. *Cor.* 8 (—10) -partita, rotata. *Stam.* 8 (—10) inter se libera ; filamentis latissimis, membranaceis, basi approximatis ; antheris flavis, apice leviter cuspidatis. *Stylus* pilis collectoribus 16 (—20) ordinibus dispositis tectus. *Stigmata* 8 (—10) filiformia, *ovarium* totum inferum, 8 (—10) -loculare, loculamentis lobis calycinis oppositis. *Capsula* nutans, 8—10-valvis, basi dehiscens. *Semina* numerosa, ovata, ferruginea, receptaculis carnosis ad angulos internos loculamentorum sitis inserta. *Alph. De Cand.*

Specific Character and Synonyms.

MICHAUXIA *lævigata ;* caule elato glaberrimo nitido, foliis duplicato - dentatis hispidis, radicalibus ovatis longe petiolatis, caulinis sessilibus oblongis, inferioribus basi attenuatis, superioribus cordatis, floribus decandris, stigmate calyce corollaque 10-partitis.

MICHAUXIA lævigata. *Vent. Hort. Cels. p.* 81. *t.* 81. *Pers. Syn. Pl. v.* 1. *p.* 418. *Spreng. Syst. Veget. v.* 2. *p.* 213. *Graham in Ed. New Phil. Journ. Dec.* 1830. *Bot. Reg. for Oct.* 1831, *cum Ic.*

MICHAUXIA decandra. *Fischer MSS.*

DESCR. *Root* perennial. *Stem* (eleven feet high,) herbaceous, smooth, shining, tapering, subsimple, upright, straight,

---

[*] Named in honor of the celebrated Botanist and Traveller, ANDRÉ MICHAUX.

straight. *Leaves* sprinkled on both sides with harsh, erect hairs, duplicato-dentate, coarsely veined and reticulate; *root-leaves* ovate, decurrent upon *petioles* longer than themselves, and on the upper part of which there are a few small pinnæ; *stem-leaves* sessile, the lower ones oblong, and somewhat attenuated at the base, higher up cordate and more acute, and gradually passing into cordate, acute, *bracteas,* with reflected aculei on the margin and on the back of the middle rib. *Flowers* scattered along nearly the whole length of the stem, on short *peduncles* in the axils of the bracteas, they expand in succession, and slowly, from below upwards. *Peduncles* solitary, bearing three flowers, of which the terminal one only has expanded. *Calyx* consisting of ten segments which are acute, at first erect, afterwards spreading at right angles, reflected in the sides and fringed with reflected aculei, and of ten other segments, which extend backwards along the pedicel, flat and shorter, but in other respects similar to the first ten, and alternating with them. *Corolla* white, much longer than the calyx, ten-parted, segments (one inch long, one line broad) linear, revolute, reflected in the edges, and ciliated with reflected aculei along the middle rib. *Stamens* ten; *filaments* connivent, subulate, winged, wings reflected, villous; *anthers* as long as the filaments, linear, yellow, bursting along their sides; *pollen* yellow. *Germen* top-shaped, inferior, ribbed, ten-locular. *Style* stout, straight, longer than the stamens, pubescent. *Stigma* ten-parted, revolute. *Ovules* very numerous, attached to a large, central receptacle. The whole plant yields, on the slightest injury, a large quantity of milky juice.

Seeds of this plant, which is a native of the North of Persia, were communicated to the Botanic Garden of Edinburgh by Dr. Fischer, in March, 1829, and the same specimen has been in flower with us in the open border for about two months after the middle of August. Even yet, (16th October,) the flowers are not expanded much above half way up the stem, and I have no doubt the plant would have continued in blossom till the frost cut it down, but for an injury which it has accidentally received. *Graham.*

Fig. 1. Stamen. 2. Section of a portion of the Germen. 3. Portion of the Calyx, seen from beneath. 4. Extremity of the Segment of the Corolla, seen from beneath.—*Magnified.*

W J H del^{t}

Pub by S. Curtis Glazenwood Eſsex. Jan^{y} 1. 1832.

Swan

ANTHERICUM SEMIBARBATUM. HALF-BEARDED ANTHERICUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Perianthium sexpartitum, patens, æquale, deciduum. *Antheræ* versatiles. *Ovarium* loculis polyspermis. *Stylus* filiformis. *Stigma* subpapillosum. *Capsula* subglobosa, 3-locularis, 3-valvis, valvis medio septiferis. *Semina* pauca, angulata, umbilico nudo. *Br.*

Specific Character and Synonyms.

ANTHERICUM *semibarbatum;* radicibus fibrosis, filamentis declinatis (exterioribus imberbibus ?). *Br.*

ANTHERICUM semibarbatum. *Br. Prod. Fl. Nov. Holl. v.* 1. *p.* 275. *Loddiges, Bot. Cab. t.* 330.

BULBINE semibarbata. *Spreng. Syst. Veget. v.* 2. *p.* 86. *Schult. Syst. Veget. v.* 7. *p.* 445.

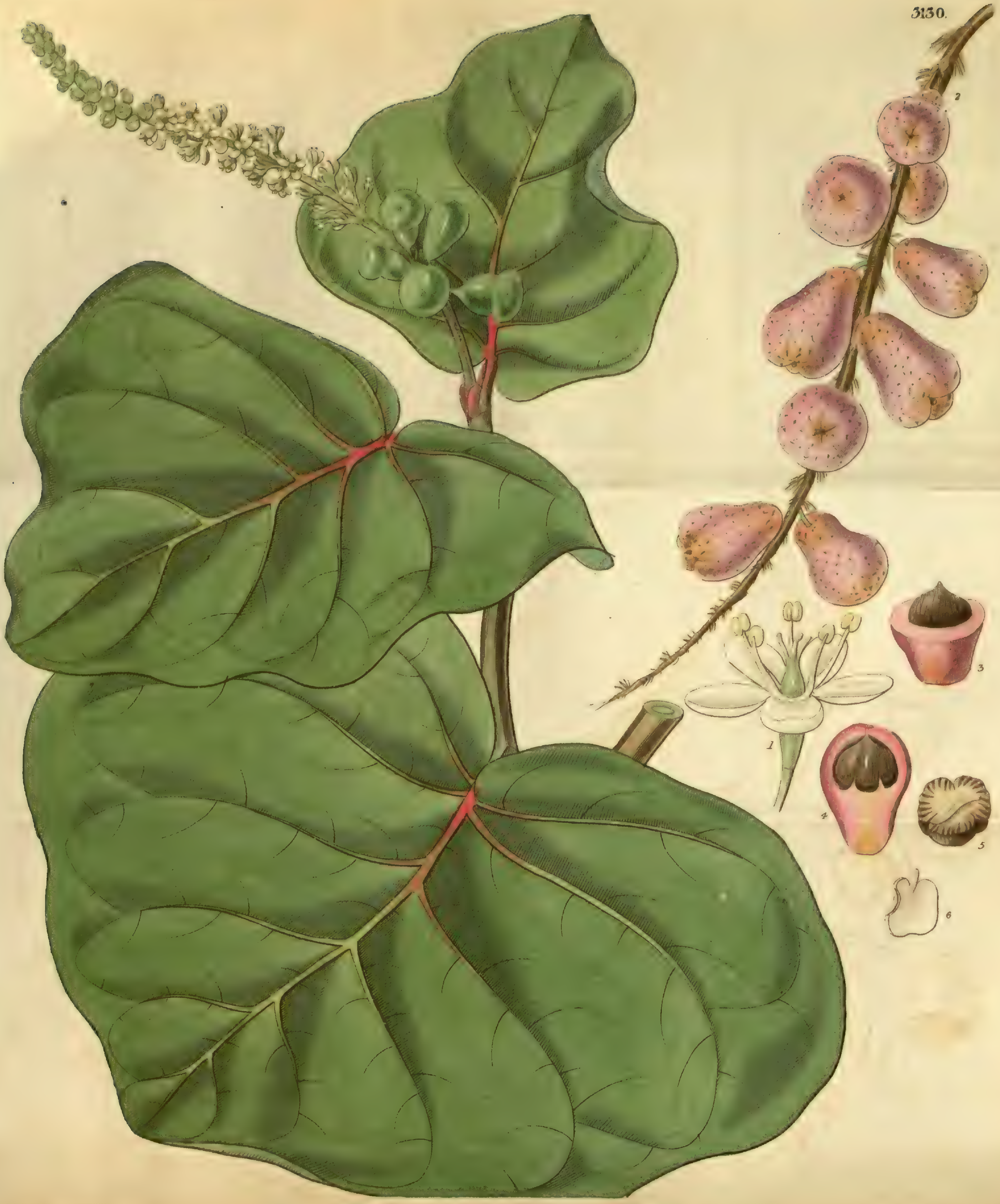
DESCR. *Root* fibrous. *Leaves* all radical, from six inches to a foot long, subulate, rounded at the back, grooved in front, glaucous-green, paler and yellowish below. *Scape* one and a half or two feet high, rounded, glaucous-green, bearing at the extremity a *raceme* of flowers, of which a few (two or three) only are expanded at a time. *Perianth* of six ovate, obtuse, spreading, bright yellow pieces, with a greenish nerve on the back. After flowering, the *pedicels,* which are an inch or more long, become very erect, and the perianth withers, persists, and changes to a yellow-brown colour. *Stamens* six, declined, *all* of the *filaments* with a tuft of yellow hairs above the middle. *Anthers* yellow,

oblong, transverse. *Pistil: Germen* globose, three-lobed. *Style* with its base bent down, then curved upwards, filiform. *Stigma* acute.

Of the Genus ANTHERICUM only two species are described as Australian by Mr. BROWN; A. *bulbosum*, figured at tab. 3017 of this work, and the A. *semibarbatum*, which we consider the present plant to be, and of which the seeds were received from Van Dieman's Land at the Glasgow Botanic Garden. It flowered in the Greenhouse in April, 1831.

As our A. *bulbosum* did not *entirely* accord with Mr. BROWN'S character of that species; so neither does the present individual quite tally with the A. *semibarbatum* of that learned author; for the stamens are not bearded in the outer filaments only, but all of them are furnished with a dense tuft of hairs above the middle. This indeed exactly accords with the flowers of a plant described by SCHULTES as a native of Van Dieman's Land, under the name of BULBINE *semibarbata*, and which he thinks may probably constitute a new species, but of which he had not seen the roots and leaves.

Fig. 1. Flower. 2. Stamen. 3. Pistil: *magnified.*



Rev L. Guilding del.

Pub. by S. Curtis, Glazenwood Essex Feb 1. 1832

COCCOLOBA UVIFERA. ROUND-LEAVED SEA-SIDE GRAPE.

****

Class and Order.

OCTANDRIA TRIGYNIA.

(Nat. Ord.—POLYGONEÆ.)

Generic Character.

Perianthium 5-partitum corollatum. *Nux* monosperma, perianthio baccato tecta.

Specific Character and Synonyms.

COCCOLOBA[*] *uvifera;* foliis cordato-orbiculatis obtusissimis nitidis glabris, racemis spicatis, fructiferis nutantibus.
COCCOLOBA uvifera. *Linn. Sp. Pl. p.* 523. *Jacq. Am. p.* 112. *t.* 73. *Willd. Sp. Pl. v.* 2. *p.* 457. *Ait. Hort. Kew. ed.* 2. *v.* 2. *p.* 421. *Spreng. Syst. Veget. v.* 2. *p.* 252.
GUAJABARA racemosa, foliis coriaceis subrotundis. *Plum. Ic. t.* 145.
COCCOLOBA foliis crassis orbiculatis, sinu acuto. *Browne, Jam. p.* 209.
PRUNUS maritima, racemosa, &c. *Sloane, Jam. v.* 2. *p.* 129. *t.* 220. *f.* 3.
(β.) racemis fructiferis erectis. *Willd. Sp. Pl. v.* 2. *p.* 457.
COCCOLOBA leoganensis. *Jacq. Am. p.* 113. *t.* 178. *f.* 33.

DESCR. A *Tree,* twenty feet or more in height, much branched, the branches flexuose. *Leaves* very beautiful, ample, orbiculari-cordate, coriaceous, entire, obtuse, waved, of a full bright and glossy green, with the principal

---

[*] κοκκος, *fruit,* and λοβος, *a lobe,* from the lobed fruit.

nerves red, especially at the base. *Petioles* short, with combined, sheathing stipules at their base. *Racemes* terminal, long, erect in flower, afterwards cernuous; *pedicels* short, in many closely-placed fascicles, with little *scales* or *bracteæ* at their base. *Flowers* fragrant. *Perianth* small, white, in five deep, spreading segments, uniting into a fleshy attenuated base, which is jointed upon the pedicel. *Stamens* eight, combined at the base into an annulus which surrounds the germen. *Germen* superior, ovate. *Styles* three. *Stigmas* obtuse. As the *fruit* advances to maturity it becomes enveloped by the enlarged and fleshy perianth, which thus forms an obovate, reddish, purple *Berry*, resembling a small *pear*, with a scar at the top where the segments of the perianth had been attached: within is one cell, divided at the base into three imperfect cells, whose dissepiments enter into the base of the nut. *Nut* roundish, very acute, longitudinally wrinkled, three-lobed at the base below, and attached by the centre. *Albumen* copious, marked with numerous clefts and fissures at the margin. In the middle of this, or nearly so, is the foliaceous *Embryo*, with its *radicle* pointing upwards.

For drawings and description of this fine plant I am also indebted to the Rev. L. Guilding of the island of St. Vincent. For though it has been cultivated in Britain since 1690, when the species was introduced by the Duke of Portland, it has not, as far as I am aware, yet produced blossoms in this country.

In its native climate, the West Indies, and the warmer parts of South America, its roots penetrate into the sands of the sea-shore and are washed by the waves: hence, in conjunction with the racemes of pulpy fruits, arises its usual English appellation. These fruits have a sweetish-acid and rather agreeable flavour, but are not much esteemed, though generally sold in the markets.

The wood, when boiled in water, gives out a red colour. It is also employed for Cabinet-work.

Fig. 1. Flower. 2. Part of a Fruit-bearing Raceme. 3. Transverse section of the Berry. 4. Vertical section of ditto. 5. Transverse section of the Nut. 6. Embryo: *magnified.*

3131.

Pub by S. Curtis Glazenwood Essex Feby. 1. 1832.

Swan

(3131)

GEITONOPLESIUM CYMOSUM. CYMOSE GEITONOPLESIUM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Perianthium 6-partitum, patens, æquale, imberbe, deciduum. *Stam.* 6, basi laciniarum inserta. *Filamenta* filiformia, glabra, apice curvata. *Antheræ* conniventes, sagittatæ, filamentis longiores. *Ovarium* loculis oligospermis. *Stylus* filiformis, 3-sulcus. *Stigma* simplex. *Bacca* oligosperma. *Semina* subglobosa.—Suffrutices, *habitu, penitus Eustrephi, cui affinitate proximi.* Flores *cymosi vel umbellati, terminales et axillares.* Pedicelli *cum perianthii basi subattenuata articulati.* Bacca *nigra, quandoque monosperma. (Forsan a planta peruviana genere diversæ sub* LUZURIAGAM.) *Br.*

Specific Character and Synonyms.

GEITONOPLESIUM * *cymosum;* cymis terminalibus bipartitis, ramis teretibus, ramulis striatis lævibus. *Br.*
GEITONOPLESIUM cymosum. *Cunningham in litt.*
LUZURIAGA cymosa. *Br. Prodr. Fl. Nov. Holl. v. 1. p.* 282. *Schult. Syst. Veget. v. 7. p.* 316. *Spreng. Syst. Veget. v. 2. p.* 94.

---

* From γειτον, *a neighbour,* and πλησιον, *near;* in allusion no less to the close affinity of this plant with EUSTREPHUS of BROWN, ("*Orange-vine*" of the Colonists) than to its locality in relation to that plant.—"The greatest quantity of G. *cymosum* I ever saw in New South Wales, where it is, comparatively speaking, a rare plant, was in the same dark-shaded wood, where EUSTREPHUS *latifolius* was equally abundant, and where they were to be seen climbing up the same tree." *Cunningham.*

DESCR. This appears to constitute a climbing and twining *shrub*, with slender, rounded, dark green, wiry *stems*, variously branched; at the setting on of the branches are small, membranaceous *scales*. *Leaves* alternate, rather remote, distichous, lanceolate, entire, glabrous, membranaceous, dark green above, paler beneath, furnished with a midrib, and finely striated, at the base much contracted and twisted, so as to form a minute sort of *petiole*. *Flowers* in a terminal, bifid *cyme* of from five to eight flowers, which are pendent. *Perianth* campanulate, of six yellow-green, oblongo-lanceolate, striated pieces, the three inner more delicate, and rather shorter than the outer. *Stamens* six. *Filaments* short, a little dilated at the base, and apparently united into a ring. *Anthers* linear, yellow, two-celled. *Germen* globose, green. *Style* slender, subulate, white. *Stigma* acute.

For the means of publishing a figure of this interesting plant, I am indebted to W. T. AITON, Esq., who supplied me with drawings and specimens for that purpose: the plant having been introduced to the Royal Garden at Kew from New Holland by ALLAN CUNNINGHAM, Esq. late Colonial Botanist there, who has recently returned from that country, after many years' residence, which have been wholly, and most enthusiastically devoted to the Natural History and Geography of it: so that Science cannot fail to derive great benefit from his researches.

Mr. BROWN has in his *Prodromus* called in question the propriety of referring this Genus to LUZURIAGA of the Flora Peruviana: and when I had lately the pleasure of looking over some specimens of the Peruvian plant with that profound Botanist, he was quite satisfied on this point.

Mr. CUNNINGHAM has hence been induced to give it the name of GEITONOPLESIUM, and observes, that Mr. DON has ascertained that the true LUZURIAGA belongs to the SMILACEÆ; and that our present Genus differs from EUSTREPHUS in having the divisions of the perianth equal and beardless; but more especially in its indehiscent fruit, which is a Berry, containing sometimes but a single seed; that of EUSTREPHUS being distinctly a trilocular, hard, baccate capsule, which, when burst, exhibits many large, black seeds.

The G. *cymosum* was found by Mr. BROWN about Port Jackson, and also within the tropical parts of New Holland. Mr. CUNNINGHAM observes it to inhabit dense, subhumid woods on the sea-coast, in which CORYPHA *australis*, the ALSOPHILA, or *Tree-fern* of the colony; EUTREPHUS *latifolius*; ACHRAS *australis*; TROCHOCARPA *laurina*; CEDRELA *Toona*; FIELDIA *australis*; CARGILLIA *australis*; several parasitical EPIDENDRA; with the more splendid Australian FILICES and MUSCI, luxuriantly grow: on the belt of a mountain bounding the Illawarra, or Five Islands' District, in lat. 34½° on the West, and elsewhere, in like shaded situations, on the extended shores of New South Wales.

Besides the two species of Mr. BROWN, G. *cymosum* and G. *montanum*, Mr. CUNNINGHAM has discovered a third, which he has also introduced at Kew. It differs in habit from G. *cymosum*; and that Botanist distinguishes it as "G. *asperum*; ramulis membranaceo-angulatis asperis."

Fig. 1. Flower. 2. Stamens and Pistil. 3. Pistil:—*magnified*.

Revd L. Guilding delt
Pub by S Curtis Glazenwood Essex. Feby 1 1832
Swan Sc.

(3132)

PIPER BETLE. BETEL PEPPER.

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—PIPERACEÆ.)

Generic Character.

Spadix floribus undique tectis. *Flores* hermaphroditi, singulus squama suffultus. *Stamina* numero indeterminata. *Antheræ* biloculares. *Ovarium* uniloculare; ovulo solitario, erecto. *Stigma* tri- aut multifidum. *Bacca.*—Frutices, *rarius* arbores, *aromaticæ, ramis articulatis, nodosis.* Folia *alterna, integra integerrima, sæpe nervosa.* Spadices *basi spatha instructi, oppositifolii, rarissime terminales, cylindracei, nonnunquam subglobosi. Kunth.*

Specific Character and Synonyms.

PIPER* *Betle;* dioicum, foliis alternis bifariis cordatis 5—7-nerviis integerrimis glabris, amentis fœmineis subcylindricis cernuis. *Roxb.*

PIPER Betle. *Linn. Sp. Pl. p.* 40. *Fl. Zeyl. n.* 27. *Vahl, Enum. v.* 1. *p.* 328. *Willd. Sp. Pl. v.* 1. *p.* 159. *Roxb. Fl. Ind. v.* 1. *p.* 160. *Ait. Hort. Kew. ed.* 2. *v.* 1. *p.* 69. *Roem. et Schult. Syst. Veget. v.* 1. *p.* 307. *Spreng. Syst. Veget. v.* 1. *p.* 115.

PIPER, qui Saururus foliis septinerviis oblongo-acuminatis. *Burm. Zeyl. p.* 193. *t.* 82. *f.* 2.

BEETLE CODI. *Rheed. Hort. Mal. v.* 7. *p.* 29. *t.* 15.

SIRII folium, &c. *Herb. Amb. v.* 5. *p.* 336. *t.* 116. *f.* 2.

DESCR. *Stems* shrubby, much branched, running along the ground or climbing to a great height, throwing out roots from the numerous joints. *Leaves* alternate, distichous, cordato-ovate, more or less broad, oblique at the base, acuminated at the point, four to seven inches long, glabrous, five to seven-nerved, nerves connected by transverse hood; till, becoming toothless, they are reduced to the extremity of having the ingredients previously reduced to a paste for them, that, without further effort, the Betel may dissolve in the mouth. Along with the *Betel,* and generally in the *Chunam,* is the mode of conveying philtres, or love-charms. How far they prove effectual I cannot take upon me to say; but I suppose that they are of the nature of our stimulant medicines, and that the direction of the passion is indiscriminate. The practice of administering poison in this manner is not followed in later times; but that the idea is not so far eradicated, as entirely to prevent suspicion, appears from this circumstance, that the guest, though taking a leaf from the betel-service of his entertainer, not unfrequently applies it to his own *chunam,* and never omits to pass the former between his thumb and fore-finger, in order to wipe off any extraneous matter. This mistrustful procedure is so common as not to give offence."

---

* In Arabic, *bâbâry,* whence the Greek πεπερι, Latin, *piper,* &c. But Dr. WILLIAM HUNTER (see Asiatic Researches, vol. 9, 8vo. ed. p. 384,) considers the Sanscrit word *papali,* (the name of the *long Pepper,*) to be the original word. *Betle* or *Betel* is derived from the Malabar *beetla-codi.*

In an ancient Sanscrit inscription on a stone found at Curugóde, in the district of *Adoni,* (or *Adavani,*) published in the IXth Volume of the Asiatic Researches, this plant is reckoned among the greatest blessings of the country:—" In its towns are numerous groves of Mangou plantations, of luxuriant *Betel,* and fields of Rice; channels of water and wells; opulent men and beautiful women; temples of gods and of the saints; and men blessed with vigour of body and every virtue."

It is related in the life of Sir STAMFORD RAFFLES, that when Lady RAFFLES reached Merambung in Sumatra, being much fatigued with walking, the rest of the party having dispersed in various directions, she lay down under the shade of a tree, when a Malay girl approached with great grace of manner, and on being asked if she wanted any thing, replied, " No, but as you were quite alone, I thought you might like to have a little *bichara* (talk); so I came to offer you some *Siri, (Betel,)* and sit beside you."

Considered medicinally, the *Betel* is known to stimulate powerfully the salivary glands and the organs of digestion, and to diminish the perspiration of the skin. Notwithstanding the statements of Mr. MARSDEN above quoted, the chewing of Betel is said by the authors of the " Dictionnaire des Sciences Médicales" to be so acrid, that it gradually corrodes the teeth to such a degree, that persons who use it habitually are deprived of all that part of the teeth above the gums at the age of twenty-five or thirty years; yet, this does not hinder the universal employment of it.

So general is the cultivation of this plant, that it is difficult to say in what part of India it is really wild. ROXBURGH never saw it in a state of nature. That author says it is raised from slips and cuttings, which are carefully planted in a rich, moist soil, well enclosed and shaded, so as to be protected in a great measure both from sun and rain. In some places, small plantations of ÆSCHYNOMENE *grandiflora* are made to train them to, and to keep off the sun; in others poles are employed for the first, and a thin shed of mats over them for the latter purpose.

TAB. 3132. Specimen with nearly mature Spikes. Fig. 1. Spike of Flowers, *nat. size.* 2. Female Flowers, *magnified.* 3. Seed or Fruit, *nat. size.* 4. The same, *magnified.*

Pub. by S. Curtis Glazenwood Essex Febʸ 1. 1832

Swan

GREVILLEA CALEYI. BLECHNUM-LEAVED GREVILLEA.

****

Class and Order.

TETRANDRIA. MONOGYNIA.

(Nat. Ord.—PROTEACEÆ.)

Generic Character.

Perianthium irregulare; foliolis laciniisve secundis: apicibus cavis staminiferis. *Glandula* hypogyna unica dimidiata. *Stigma* obliquum depressum (raro subverticale conicum). *Folliculus* unilocularis, dispermus, loculo centrali. *Semina* marginata, v. apice brevissime alata. *Br.*

Specific Character and Synonyms.

GREVILLEA *Caleyi;* foliis pinnatis super pubescentibus pilis patulis subter cinereis tomentosis tomento subappresso, laciniis oblongo-linearibus parallelis integerrimis, racemis erectis, perianthiis ovariisque hirsutis, stigmate dilatato subverticali convexo. *Br.*

GREVILLEA Caleyi. *Brown, Prodr. Suppl.* 1. *p.* 22.

GREVILLEA blechnifolia. *Cunningh. MSS. apud Hort. Kew.*

DESCR. This plant I have not seen growing, but, judging by the specimens communicated from Kew, it constitutes a moderately-sized *shrub*, with rounded, zigzag branches clothed with dense, ferruginous down. *Leaves* alternate, remote, patent, often recurved, pinnated with many alternate, linear-oblong, obtuse segments, the upper ones decurrent, the margins recurved, above downy with patent, ferruginous hairs, below whitish, and silky with glossy, appressed hairs. The young foliage and young branches are beautifully tinged with red, giving the whole plant a great richness of colour. *Racemes* shorter than the leaves, axillary, and sometimes bearing a leaf on the peduncle. *Pedicels* very short. *Flowers* secund, brownish-red inclining to purple. *Tube* of the *perianth* rather slender, swollen below, curved above, very hairy. *Germen* oblong, clothed with white, silky hair. *Style* very long, wavy, bright red. *Stigma* green, capitate, somewhat oblique.

For specimens and a drawing of this lovely plant, I am indebted to WILLIAM T. AITON, Esq. who received seeds of it at the Royal Gardens of Kew in 1829, from Mr. ALLAN CUNNINGHAM, collected by that most zealous and able Botanist, between Port Jackson and Broken Bay, New South Wales. It was previously (in 1824) found by the same Naturalist, who forwarded it to England with the appropriate MS name of GREVILLEA *blechnifolia*. But it appears to have been already known to Mr. BROWN, from specimens gathered by the late Mr. CALEY, in 1804, and by him it has been published in the Supplement to the Prodr. Fl. Nov. Holl. as G. *Caleyi*.

It flowered in the greenhouse at Kew, in June, 1830.

Fig. 1. Flower. 2. Perianth cut open to show the inside of the Tube and the Stamens: ***magnified.***

3134.

W.J.H. del.

Pub. by S. Curtis Glazenwood Essex. Feby 1.1832.

Swan sc.

(3134)

GRATIOLA TETRAGONA. FOUR-SIDED HEDGE-HYSSOP.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Cal. 5-partitus. *Corolla* tubulosa, bilabiata, labio superiore bilobo, inferiore trifido æquali. *Stam.* 2 antherifera, 2—3 sterilia (nunc 4 antherifera.) *Stigma* bilamellatum. *Caps.* 4-valvis, dissepimento e marginibus inflexis tardius solubilibus.—Herbæ *oppositifoliæ.* Flores *axillares, bibracteati. Br.*

Specific Character.

GRATIOLA* *tetragona ;* glabra, caule tetragono angulis obtuse alatis, foliis lanceolatis acute serratis inferne attenuatis subauriculatis, floribus subsessilibus subspicatis.

DESCR. Perennial. *Stem* herbaceous, nearly simple, erect, a foot or more high, four-sided, glabrous, the angles with short, obtuse wings. *Leaves* opposite, two and a half to three inches long, lanceolate, very acute, almost acuminate, deeply and sharply serrated, glabrous, the younger ones minutely punctated, and with the serratures glandular, all of them glabrous, attenuated and somewhat auricled at the base. These leaves are gradually smaller upwards, so that the floral leaves may almost be considered bracteas. *Flowers* small, forming a sort of dense, pyramidal *raceme,*

---

* Derived from *Gratia Dei,* " by the grace or favour of God ;" in allusion to the eminent medicinal virtues of the most common species, GRATIOLA *officinalis.*

so closely are the small leaves placed, in the axils of which the flowers are situated. *Calyx* deeply five-partite, the segments subulato-lanceolate, and bearing at the base, on each side, a subulate *bractea,* about as long as the calyx. *Corolla* bright and deep blue a little inclining to purple, the tube swollen at the base, slightly hairy; *limb* bilabiate, striated; *upper lip* roundish, erect, emarginate; *lower one* large, horizontal, deeply cut into three cuneate, slightly waved lobes: the mouth and tube within hairy. *Anthers* four, didynamous, all perfect; no sterile stamens. *Pistil: Germen* oval-oblong, inserted on a yellow, fleshy disk or ring. *Style* about as long as the tube of the corolla, white: *Stigma* broad, compressed, white, two-lipped?

I have referred this plant to GRATIOLA, with which Genus it agrees in habit, and in the calyx and corolla; but from which, as defined by Mr. BROWN, it differs by having four fertile stamens.

Seeds of it were received at the Botanic Garden of Glasgow from Buenos Ayres, by favor of Mr. TWEEDIE. Cultivated in the stove, it produced its small but bright blossoms in August, 1831.

Fig. 1. Front view of a Flower, with its Floral Leaf. 2. Upper Side of a Flower. 3. Section of the Tube of the Corolla. 4. Calyx, Bracteas, and Pistil. 5. Pistil:—*magnified.*

W.J.H del.

Pub by S. Curtis Glazenwood Essex Feb. 1. 1832.

Sw.

(3135)

SALVIA STRICTIFLORA. ERECT-FLOWERED SAGE.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Cal. subcampanulatus, bilabiatus, labio superiore 3-dentato, inferiore bifido. *Cor.* ringens. *Filamenta* duo fertilia bifida, lobo altero adscendenti anthera dimidiata, altero sterili. *Br.*

Specific Character and Synonym.

SALVIA *strictiflora;* glabra suffruticosa, foliis firmis ovato-cordatis obtusis venosis serratis subtus pallidis, bracteis ovali-oblongis acutis calycibusque (iis sublongioribus) glandulosis, floribus erectis, corolla pilosa, stylo staminibusque exsertis.

SALVIA strictiflora. *Hook. in Bot. Misc. v. 2. p. 234.*

DESCR. *Plant* three feet high, somewhat shrubby at the base, and there principally branched; *branches* square, pale green, subherbaceous, glabrous. *Leaves* ovato-cordate, two to three inches long, on petioles rather shorter than themselves, glabrous, obtuse, somewhat wavy, of a rather firm texture, dark green above, and marked with deeply impressed nerves, pale beneath with prominent nerves, every where glabrous. *Raceme* erect, much elongated in the native specimens, shorter in the cultivated ones, terminal. *Flowers* erect, opposite, subsecund. *Bracteas* deciduous, ovate, acute, glandular and viscid. *Pedicels* rather shorter than the calyx, glabrous. *Calyx* tubular, striated, clothed with viscid glands, two-lipped; lips nearly equal, erect, upper one entire, acute, lower one bifid. *Corolla* three or four times the length of the calyx, rather bright red, clothed with fulvous hairs. *Upper lip* the longest, arched, somewhat acute, entire; *lower one* of three concave, rounded lobes, of which the middle one is the largest. *Filament* very short. *Connectivum* exceedingly long, white, lower extremity somewhat spathulate, acute, reddish, upper extremity exserted and incrassated, red, and bearing a transverse, solitary cell of an *anther*, filled with orange-coloured *pollen*. *Style* red, much exserted: *Stigma* bifid, with one long, recurved segment.

In general aspect, it must be confessed that the present SALVIA is closely allied to S. *biflora* of RUIZ and PAVON, Fl. Per. t. 38. f. *a*.; but the latter is described and figured as "planta villosissima;" whereas our plant is quite destitute of hairs in every part except the corolla. SMITH's S. *tubiflora* (Icones, t. 26,) has the stem and leaves hairy, and is, probably, the same with the S. *biflora*, as RUIZ and PAVON suggested.

S. *strictiflora* was found by Mr. CRUCKSHANKS between Yazo and Obrajillo in the valley of Canta, Peru, and seeds were thence forwarded to our garden, where the plant flowered in the stove in December, 1831. Mr. MATTHEWS has since gathered the same plant at Cuesta of Huamaritanga and Purcochuco in Peru, and sent it to his correspondents marked "No. 467, SALVIA *biflora*." The vernacular name he states to be "*Socoencha*." The whole plant on being touched yields a strong, but not agreeable scent.

Fig. 1. Stamen. 2. Calyx: *magnified*.

3136

Dr Greville delt

Pub by S. Curtis Glazenwood Essex. Feby 1. 1832

Sw

(3136)

STYLIDIUM SCANDENS. CLIMBING STYLIDIUM.

Class and Order.

GYNANDRIA TETRANDRIA.

(Nat. Ord.—STYLIDEÆ.)

Generic Character.

Cal. bilabiatus. *Cor.* irregularis, 5-fida, lacinia quinta (labello) dissimili, minore, deflexa (raro porrecta) reliquis patentibus (raro geminatim cohærentibus. *Columna* reclinata, duplici flexura; *Antheris* bilobis, lobis divaricatissimis; *Stigmate* obtuso, indiviso. *Capsula* bilocularis, dissepimento superne quandoque incompleto. *Br.*

Specific Character and Synonyms.

STYLIDIUM[*] *scandens;* caule scandenti, foliis linearibus apice spirali cirrhoso, fauce coronata, labello appendiculato, columna superne pubescenti. *Br.*

STYLIDIUM scandens. *Brown, Prodr. Fl. Nov. Holl. v.* 1. *p.* 570. *Spreng. Syst. Veget. v.* 3. *p.* 746. *Graham, in Edin. Phil. Journ. Dec.* 1831.

DESCR. *Root* perennial. *Stem* (eighteen inches high,) slender, shining, red, glabrous, branched. *Leaves* (three inches and a half long) whorled, crowded, linear, channelled, mucronate, rolled back at the apex in form of a cirrhus, throwing out long, filiform, single, unbranched, red and shining roots from their axils. *Bracteæ* green, adpressed, one below each pedicel, and two nearly opposite above its middle, the former small, ovato-acuminate, or larger and subulate, the latter very minute and scale-like. *Corymbose racemes*, erect, clustered at the extremities of the branches. *Pedicels* (three to nine lines long) spreading, single-flowered, red, glabrous, filiform. *Calyx* superior, bilabiate, two to

---

[*] From στυλος, *the style*, or *column*, which is a remarkable feature in the flower.

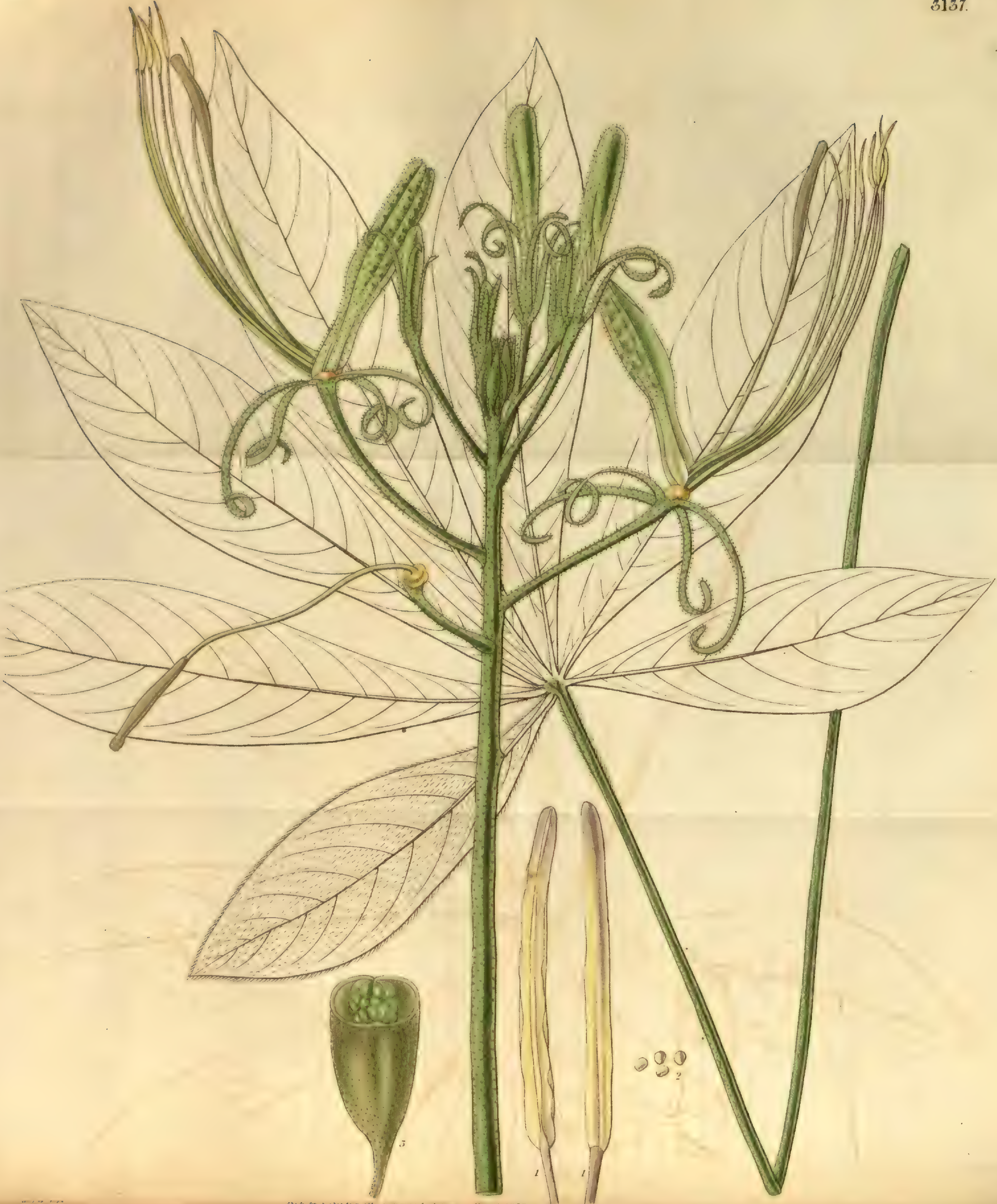
three-partite, green, glabrous, adpressed, segments elliptical, with paler edges, ciliated. *Corolla* (about ten lines across,) monopetalous; tube epigynous, nearly colourless, twice the length of the calyx; limb five-partite; labellum pale, reflected, ovate, acute, fringed with glandular hairs, auricled, auricles spreading, very slender, subulato-filiform, rose-coloured, twice the length of the labellum, with a few glandular hairs near the bases, under a high magnifying power appearing rough and serrulate; other segments of the corolla lilac and imbricated in the bud, afterwards rose-coloured, paler below, darker in the throat, spreading or slightly reflected, obovate, sparingly ciliated, crenate at the apex, the two next the labellum crowned with an erect, generally emarginate subspathulate scale, the two others naked. *Column* terminal, reflected over the labellum, and irritable, flat, white at its base, lilac in the middle, yellow towards its extremity, and there especially, but slightly also on its upper surface, glanduloso-pubescent. *Anthers*, after bursting, brownish-yellow, surrounded by a tuft of shining, transparent, at length yellow pubescence, bilobular, lobes divaricating, elliptical, pointed at the lower extremity, bursting along the front. *Stigma* in the centre between the anthers, green, at first hidden and small, but afterwards much enlarged, capitate and raised upon a conical neck, pubescent. *Germen* green, becoming reddish-brown when ripe, ovate, glabrous, unilocular; ovules placed on a round central receptacle, having the mere rudiments of a dissepiment at its base.

This very pretty species of a singular and interesting genus was raised at the Botanic Garden, Edinburgh, from seeds communicated by the late Lord BLANTYRE; a nobleman, whose melancholy death, in a period of undistinguishing popular tumult, was deplored far beyond the wide-spread circle which includes those who had a personal knowledge of his many virtues. They had been received by his Lordship from Colonel LINDSEY, to whom, and to Mr. FRASER, I owe the possession of excellent specimens collected at King George's Sound. The flowers were slowly developed in the greenhouse, and in succession during the whole month of November. *Graham.*

The drawing from which our plate is engraved, was obligingly made by Dr. GREVILLE.

Fig. 1. Front view of a Flower. 2. Back view of the same. 3. Column, with the Anthers in a young and unexpanded state. 4. Column, with the Anthers burst:—all *magnified.*

3137.



Pub. by S. Curtis Glazenwood Essex Mar 1 1832

(3137)

CLEOME GIGANTEA. GIGANTIC CLEOME.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—CAPPARIDEÆ.)

Generic Character.

Cal. 4-sepalus, patens, subæqualis. *Pet.* 4. *Torus* subhemisphæricus. *Stam.* 6, rarius 4. *Siliqua* dehiscens in calyce stipitata aut sessilis. *D C.*

Specific Character and Synonyms.

CLEOME* (PEDICELLARIA) *gigantea;* fruticosa velutino-pubescens subviscosa, foliis 7-foliolatis obovato-lanceolatis.

CLEOME gigantea. *Linn. Mant. p.* 430. *Jacq. Obs.* 4. *p.* 1. *t.* 75. *Willd. Sp. Pl. v.* 3. *p.* 567. *Ait. Hort. Kew. ed.* 2. *v.* 4. *p.* 131. *De Cand. Prodr. v.* 1. *p.* 238. *Schult. Syst. Veget. v.* 6. *p.* 28. *Spreng. Syst. Veg. v.* 2. *p.* 122.

CLEOME viridiflora. *Schreb. Nov. Act. Nat. Cur.* 4. *p.* 136. *t.* 3.

SINAPISTRUM giganteum. " *Mænch, Meth. p.* 250."

DESCR. *Stem* three to five feet high, erect, shrubby, branched above, every where downy, the younger branches glandular. *Leaves* alternate, septenate, petioled; *leaflets* spreading in a digitate manner; lanceolate or inclining to obovate, acute, narrower at the base, on both sides clothed with a dense, silky pubescence: the midrib strong, from which diverge many parallel, lateral veins. *Petiole* longer than the leaf, rounded, downy. *Raceme* terminal, large, erect. *Pedicels* jointed upon the stem, one to two inches long, thickened upwards, glandular. *Calyx* of four linear, unequal, reflexed and at length revolute, glandular and deciduous leaflets. *Petals* greenish, linear, two inches and more long, cohering by their margins, and opening only on one side, whence the stamens and pistil are protruded. *Torus* subglobose, fleshy, orange-coloured. *Stamens* six, equal in length. *Filaments* three inches long, curved upwards, greenish, tinged with red towards the summit. *Anthers* linear, purplish-yellow, opening by lateral fissures. *Pollen* globose, yellow. *Germen* linear, compressed, downy, three-fourths of an inch long, crowned with the sessile and flat *stigma,* and supported upon a stalk which is nearly as long as the stamens. *Ovules* many, on longitudinal, sutural, filiform receptacles.

---

* Anciently given to some plant allied to SINAPIS, and now to the present Genus on account of its affinity with SINAPIS.

Linnæus says of this species " Saporis urentissimi, odoris virosissimi," properties which we omitted to notice at the time the drawing was made. The same author gives it as an inhabitant of Guinea :—the Hortus Kewensis of South America, whence it was introduced into our stoves by Dr. Fothergill, in 1774. The plant here described, flowered in the Glasgow Botanic Garden in June, 1827, and was raised from seeds sent by Mr. Lockhart from Trinidad. The flowers are, perhaps, among the largest of the Genus; but they are less conspicuous than many others, on account of their almost uniform pale green colour.

Fig. 1. Stamens. 2. Pollen. 3. Section of a Germen : *magnified.*

3138.

W.J.H. del^t.

Pub by S. Curtis Glazenwood Essex Mar 1.1832

Swan Sc.

(3138)

LOBELIA ROBUSTA. THICK-STEMMED LOBELIA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CAMPANULACEÆ.)

Generic Character.

Corolla tubo hinc fisso (raro integro); *limbo* 5-partito. *Antheræ* connatæ. *Stigma* bilobum (nunc indivisum). *Capsula* bilocularis (raro 3-loc.), apice supero bivalvi.—Herbæ *vel* Suffrutices, *pleræque lactescentes.* Folia *alterna, integra vel laciniata, raro fistulosa.* Flores *racemosi, terminales vel axillares, solitarii, pedicellis bibracteatis vel nudis.* Antheræ *sæpius barbatæ. Br.*

Specific Character and Synonym.

LOBELIA *robusta;* caule suffruticoso, foliis obovato-lanceolatis acuminatis grosse dentatis glabris nitidis, racemis terminalibus simplicibus.

LOBELIA robusta. *Graham, in Edin. Phil. Journ. Dec.* 1831.

DESCR. *Root* perennial. *Stem* very stout, erect, almost woody, branched, green and glabrous, irregularly winged with the persistent, decurrent, occasionally wavy bases of the leaves. *Leaves* numerous, scattered, crowded towards the apex, falling off below, obovato-lanceolate, acuminate, attenuated at the base, and decurrent for a little way along the stem, glabrous, pale green and shining, waved, coarsely and sharply toothed, veined, middle rib and veins prominent behind, and, especially when young, lilac-coloured. *Raceme* terminal, gradually elongating, supported on a naked, slightly villous stalk. *Flowers* large, very numerous,

ous, secund, crowded. *Pedicels* (one inch long) compressed, finely villous, each with one bractea at the base, and two nearly opposite below the middle. *Bracteæ* linear, acute, villous, entire or sparingly toothed, the lowest nearly as long as the peduncle and decurrent, the others shorter. *Calyx* five-parted, green, villous, persistent, segments deltoideo-linear, acuminate, serrated, at length reflected at the apex. *Corolla* deep and dull purple, before the separation of the segments falcate, segments linear, acute, the two upper becoming reflected laterally, the others scarcely altering their form. *Filaments* pink, straight, flattened, ciliated, ciliæ colourless. *Anthers* lead-coloured, cernuous, the two upper ciliated for half their length. *Stigma* bilobular, pubescent, scarcely ciliated, pink. *Style* (one inch long) filiform, glabrous, slightly coloured. *Germen* inferior; *ovules* numerous.

A native of Hayti. A plant was received at the Botanic Garden, from our excellent friend Dr. Fischer of St. Petersburgh, in 1830. It flowered in August, 1831. *Graham.*

Fig. 1. Flower. 2. Summit of the Style and Stigma: slightly *magnified.*

3139.

Revd. L. Guilding del.t

Pub by S. Curtis Glazenwood Essex Mar 1. 1832

Sw.

PIPER NIGRUM. BLACK, OR COMMON PEPPER.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—PIPERACEÆ.)

Generic Character.

Spadix floribus undique tectus. *Flores* hermaphroditi, singulus squama suffultus. *Stamina* numero indeterminata. *Antheræ* biloculares. *Ovarium* uniloculare, ovulo solitario, erecto. *Stigma* tri- aut multifidum. *Bacca*—Frutices, *rarius* arbores, *aromaticæ, ramis articulatis, nodosis.* Folia *alterna, integra, integerrima, sæpe nervosa.* Spadices *basi spatha instructi, oppositifolii, rarissime terminales, cylindracei, nonnunquam subglobosi. Kunth.*

Specific Character and Synonyms.

PIPER *nigrum ;* monoicum vel polygamum, foliis lato-ovatis acuminatis 5—7-nerviis subcoriaceis nitidis, geniculis nodosis.

PIPER nigrum. *Linn. Sp. Pl. p.* 40. *Vahl, Enum. v.* 1. *p.* 328. *Willd. Sp. Pl. p.* 159. *Roxb. Fl. Ind. v.* 1. *p.* 153. *Ait. Hort. Kew. ed.* 2. *v.* 1. *p.* 69. *Roem. et Schult. Syst. Veget. v.* 1. *p.* 307. *Spreng. Syst. Veget. v.* 1. *p.* 112. *Dict. des Sc. Nat. cum Ic.*

PIPER aromaticum. *Poir. Enc. Meth. v.* 5. *p.* 458.

MOLAGO-CODI. *Rheed. Mal. v.* 7. *p.* 23. *t.* 12.

DESCR. *Stem* trailing or climbing, shrubby, flexuose, and dichotomously branched, jointed, swelling at the joints, and often throwing out radicles from the joints, which adhere to bodies like those of ivy, or become roots striking into the ground. *Leaves* from four to six inches long,

alternate, distichous, broadly ovate, acuminated, of a full green and glossy colour, paler beneath, five to seven-nerved, the nerves connected by lesser transverse ones or veins, and prominent beneath. *Petioles* rounded, from half an inch to nearly an inch long. *Catkins* opposite the leaves, stalked, from three to six inches long, slender, drooping, apparently some are male, others female, while sometimes the flowers are furnished both with *stamens* and *pistil*; these catkins are mostly confined to the upper part of the branches; observing, Mr. GUILDING remarks, no season; for at the same time and on the same plant, flowers and fruit may be seen in every stage of progress. The number of *stamens* is three to a flower. The *pistil* is crowned with three recurved *stigmas*. As the fruit, which is so well known as a condiment, ripens, it is at first green, then red, afterwards black.

This plant, like the PIPER *Betle*, figured in our last number, has, I believe, never blossomed in our stoves, and we are, consequently, thankful to Mr. GUILDING for enabling us to give a representation of a flowering specimen of this very valuable spice. It is a native of the hotter parts of India, where it is most extensively cultivated, and where it constitutes a highly important article of commerce. It was known to the Greeks in the time of THEOPHRASTUS and DIOSCORIDES, who, as well as the Romans, distinguished between the *white* and the *black* pepper. And whilst the use of the *Betel Pepper* is confined almost wholly to the Eastern nations, the common Pepper is an article in general use throughout every part of the civilized world. Still, it is in Asia, where the stomach is weakened by excessive perspirations, produced by the heat of the climate, by a humid atmosphere, and a too general addiction to vegetable diet, that it is employed as a powerful stimulant. Thus in a medical point of view, it has been found to be an excellent tonic, calculated to create appetite and to promote digestion.

Pepper of the shops, as is well known, is the fruit of this plant: and it is called *black* Pepper, while it is in a state of nature, covered by its external coat. *White Pepper* is the fruit of the same species deprived of its external coat; which is accomplished, by macerating the fruit or grains in water, when the coat swells and bursts. It is afterwards dried in the sun, and by friction and winnowing cleared of the coat. It is then of a paler colour, but as the husk or bark contains a powerful principle, it is evident that the *white* Pepper loses much of its stimulating property, and is inferior to the black.

In the cultivation of the Pepper, moist situations along the banks of rivers are preferred, where Pepper-plantations or gardens, as they are termed, are formed. In Sumatra, where, according to MARSDEN, the most important and most abundant article of commerce is *Pepper*, the ground is marked out in the form of a regular square or oblong, with intersections throughout, at the distance of six feet, (being equal to five cubits of the measure of the country,) the intended interval between the plants, of which there are commonly either one thousand or five hundred in each garden: the former number being required from those who are heads of families, (their wives and children assisting them in the work,) and the latter from single men. Industrious or opulent persons, have sometimes gardens of two, or three thousand vines. A border, twelve feet in width, within which limit no tree is suffered to grow, surrounds each garden, and is commonly separated from others by a row of shrubs, or an irregular hedge. When the nature of the country admits of it, the whole or greater part of the gardens of a *dusun* or village lie adjacent to each other, both for the convenience of mutual assistance in labour, and mutual protection from wild beasts; single gardens being often abandoned from apprehension of their ravages, and where the owner has been killed in such a situation, none will venture to replace him. After lining out the ground, and marking the intersections by slight stakes, the next business is to plant the trees that are to become props to the Pepper, as the Romans planted Elms, and the modern Italians more commonly set Poplars and Mulberries, for their Grape Vines. These are cuttings of the *Chinkariang* (ERYTHRINA *Corallodendron*), usually called *Chinkareens*, put into the ground about a span deep, sufficiently early to allow time for a shoot to be strong enough to support the young Pepper plant, when it comes to twine about it. The cuttings are commonly two feet in length, but sometimes a preference is given to the length of six feet, and the Vine is then planted as soon as the *Chinkareen* has taken root; but the principal objections to this method are, that in such a state they are very liable to fail and require renewal, to the prejudice of the garden, and that their shoots are not so vigorous as those of the short cuttings, frequently growing crooked, or in a lateral, instead of a perpendicular direction. The circumstances which render the *Chinkareen* peculiarly proper for this use are, its readiness and quickness of growth, even after the cuttings have been kept for some time in bundles*, if put into the ground with the first rains; and the little thorns with which it is armed, enabling the Vine to take a firmer hold. They are distinguished into two sorts, the *white* and *red*, not from the colour of the flowers (as might be supposed) for both are red, but from the tender shoots of the one being whitish, and of the other a reddish hue. The bark of the former is of a pale ash colour, of the latter, brown: the former is sweet, and the food of elephants, for which reason, it is not much used in parts frequented by those animals; the latter is bitter and unpalatable to them: but they are not deterred by the short prickles which are common to the branches of both sorts.

In Penang, the labour of the gardens is undertaken by the Chinese, who contract for forming the plantations and keeping them in order for three years, when they come into bearing, and two hundred and twenty-five dollars for each hundred plants is paid by the proprietor. They are reckoned to be in full bearing at the end of five or six years, and they continue so till they are fourteen years old. The labour of cleansing the vines, throwing up earth about their roots, and collecting the produce of a plantation of forty-six thousand plants, has been performed by sixteen Chinese workmen.

"As soon as any of the berries," says Mr. MARSDEN, "or corns, redden, the bunch is reckoned fit for gathering, the remainder being then generally full grown, although green: nor would it answer to wait for the whole to change colour, as the most mature would drop off. It is collected in small baskets slung over the shoulder, and with the assistance of the women and children, conveyed to a smooth, level spot of clean hard ground, near the garden or village, where it is spread, sometimes upon mats, to dry in the sun; but exposed at the same time to the vicissitudes of the weather, which are not much regarded, nor thought to injure it. In this situation it becomes black and shrivelled, as we see it in Europe, and as it dries, is hand-rubbed occasionally to separate the grains of the stalk. It is then winnowed in large, round, shallow sieves, called *Nyiru*, and put in large vessels, *(Kulit kaya,)* under their houses, until the whole of the crop is gathered, or a sufficient quantity for carrying (usually by water,) to the European factory or *gadong*, at the mouth of the river. That which has been gathered at the properest stage of maturity will shrivel the least; but, if plucked too soon, it will, in a short time, by removal from place to place, become mere dust. Of this defect, trial may be made by the hand; but as light Pepper may be mixed with the sound, it becomes necessary that the whole should be garbled at the scale by machines constructed for the purpose. Pepper that has fallen to the ground overripe and been picked up from thence, will be known by being stripped of its outer coat, and in that state is an inferior kind of white Pepper."

---

* It is a common and useful practice to steep these bundles in water, and afterwards reject such of them as do not, in that state, show signs of vegetation.

Two crops of Pepper are generally produced in one year: at Penang, the first gathering commences in December; at which time, the vines put out new flowers, whose fruit is matured in April and May, when the second harvest begins and lasts till July. In Sumatra, the greater crop *(pupul agung)* takes place between the months of October and March, and the lesser, or half-crop *(buah sello)* between April and September.

In the small island of Penang, in the year 1802, the quantity of Pepper produced was estimated at between eighteen and twenty thousand *picols;* which, at twelve dollars the picol, amounted to 216,000 dollars. In Sumatra previous to the year 1780, the price paid to the grower by the Company was ten Spanish Dollars per *bahar* of five hundred weight, or five hundred and sixty pounds. From the same country too, about one-third of the quantity of black Pepper collected, but none of the white, is annually sent to China. The produce of Sumatra in this article is, however, probably very small, compared to what is stated by the Commandant CUNES in relation to the Pepper trade, of the Malabar coast, in a Memoir addressed to his successor GASPAR DE JONG, in the year 1756, "no less than ten full cargoes (amounting to between eight and nine millions of pounds weight) might be annually exported. But the half of this quantity is carried over the mountains to the coast of Coromandel, to the north, to the Deckan, and further on to different parts of Hindostan. This Pepper is esteemed the best of all that is produced in Asia, and is the most sought after by all nations" *.

Fig. 1. Portion of a Male Spike. 2. Perfect Flower. 3. Fruit or Grain of Pepper *(nat. size)*. 4. The same cut open to show the situation of the Embryo at the top of the Albumen. 5. Embryo included in its sack: *magnified.*

---

* See STAVORINUS's Voyages, v. 3. p. 220.

3140

W. J. H. delt

Pub by S. Curtis Glazenwood Essex Mar 1 1832

(3140)

LILIUM TENUIFOLIUM. SLENDER-LEAVED LILY.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—LILIACEÆ.)

Generic Character.

Cor. campanulata, 6-partita, regularis, sulcis nectariferis in laciniis. *Caps.* 6-sulca, valvis reticulo fibroso nexis.—*Semina* compressa. *Spreng.*

Specific Character and Synonyms.

LILIUM * *tenuifolium;* foliis sparsis angustissime linearibus, caule unifloro, flore cernuo, petalis demum revolutis, intus rima nectarifera pubescente.

LILIUM tenuifolium. *Fischer MSS.* " *Schrad. Plant. Rar. Hort. Gott. Fasc.* 1." *Schult. Syst. Veget. v.* 7. *p.* 409.

DESCR. *Plant* about a foot high. *Stem* erect, glabrous, slender, clothed with numerous, exceedingly narrow, glabrous, almost filiform *leaves,* which are slightly twisted, almost disappearing on the upper part of the stem. *Flowers* solitary, terminal, drooping, of a fine vivid, deep orange-red colour. *Petals* broadly lanceolate, patent, at length revolute, striated, each having, at its bases and extending half-way up, a linear cleft, densely bordered with short hairs. *Filaments* subulate, red. *Anthers* oblong, dark green, the *cells* and *pollen* deep orange. *Germen* oblong, thickened upwards, with three deep, and three lesser furrows, green. *Style* curved, green, thickened upwards, and crowned with the three-lobed, velvety, bright green *stigma*, which soon becomes covered with the bright orange-coloured *pollen*.

---

* From *li,* white, in Celtic, according to THÉIS. The common white garden Lily is considered the emblem of purity.

Drawn from a plant which flowered in the open border in the Edinburgh Botanic Garden in the month of June. It is a native of Dahuria, and was named by our valued friend Dr. FISCHER, and by him introduced to our gardens. It is equally deserving of cultivation with the L. *pumilum* and very nearly resembles it: so much so, that except in the presence of the downy rima at the claw (which is indeed a very distinct character,) I scarcely know how it is to be distinguished. It is described in SCHULTES' Syst. Veget. as having patent petals: and such is the case with the dried specimens communicated to me by Dr. FISCHER; but it appears that as the flower is more advanced in age, the petals become revolute, as in L. *pumilum*, and as represented in our figure.

Fig. 1. Petal. 2. Stamen. 3. Pistil: more or less *magnified*.

3141.

Rev. L. Guilding del.

Pub by S. Curtis Glazenwood Essex Mar 1 1832

CERASUS SPHÆROCARPA. NOYAU CHERRY.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—ROSACEÆ.)

Generic Character.

Drupa globosa aut basi umbilicata, carnosa, glaberrima, polline cæsio destituta, nucleo subgloboso lævi.—Folia *juniora conduplicata.* Flores *nunc pedicellis* 1*-floris e gemina squamosa plurimis umbellato-fasciculatis insidentes, et tunc foliis præcociores, nunc ramosi terminales et post folia evoluti.* **D. C.**

Specific Character and Synonyms.

CERASUS* *sphærocarpa;* racemis axillaribus erectis folio brevioribus, foliis perennantibus eglandulosis integerrimis nitidis, fructibus subglobosis.

CERASUS sphærocarpa. *Loisel.—De Cand. Prodr. v.* 2. *p.* 540.

PRUNUS sphærocarpa. *Swartz, Fl. Ind. Occ. v.* 2. *p.* 927. *(not Mich.). Willd. Sp. Pl. v.* 2. *p.* 987. *Spreng. Syst. Veget. v.* 2. *p.* 478.

MYRTIFOLIA ARBOR, foliis latis subrotundis, flore albo. *Sloane, Jam. v.* 2. *p.* 79. *t.* 193. *f.* 1.

DESCR. This forms a *Tree* (according to Mr. GUILDING, to whom I am indebted for the accompanying drawing with remarks) from thirty to thirty-five feet in height, with greyish, smooth *bark* and somewhat erect *branches.* The *leaves* are alternate, three to four inches long, on short, grooved *petioles,* evergreen, coriaceous, shining, oval, or oval-lanceolate, shortly acuminate at both extremities, quite entire at the margins, penninerved, destitute of glands, often twisted obliquely at the extremities. *Racemes* on rather short *peduncles,* erect, glabrous, many-flowered, the

---

* From *Cerasus*, a Town of Pontus in Asia, whence LUCULLUS is said to have introduced the cultivation of the Cherry into Italy, seventy-three years B. C.

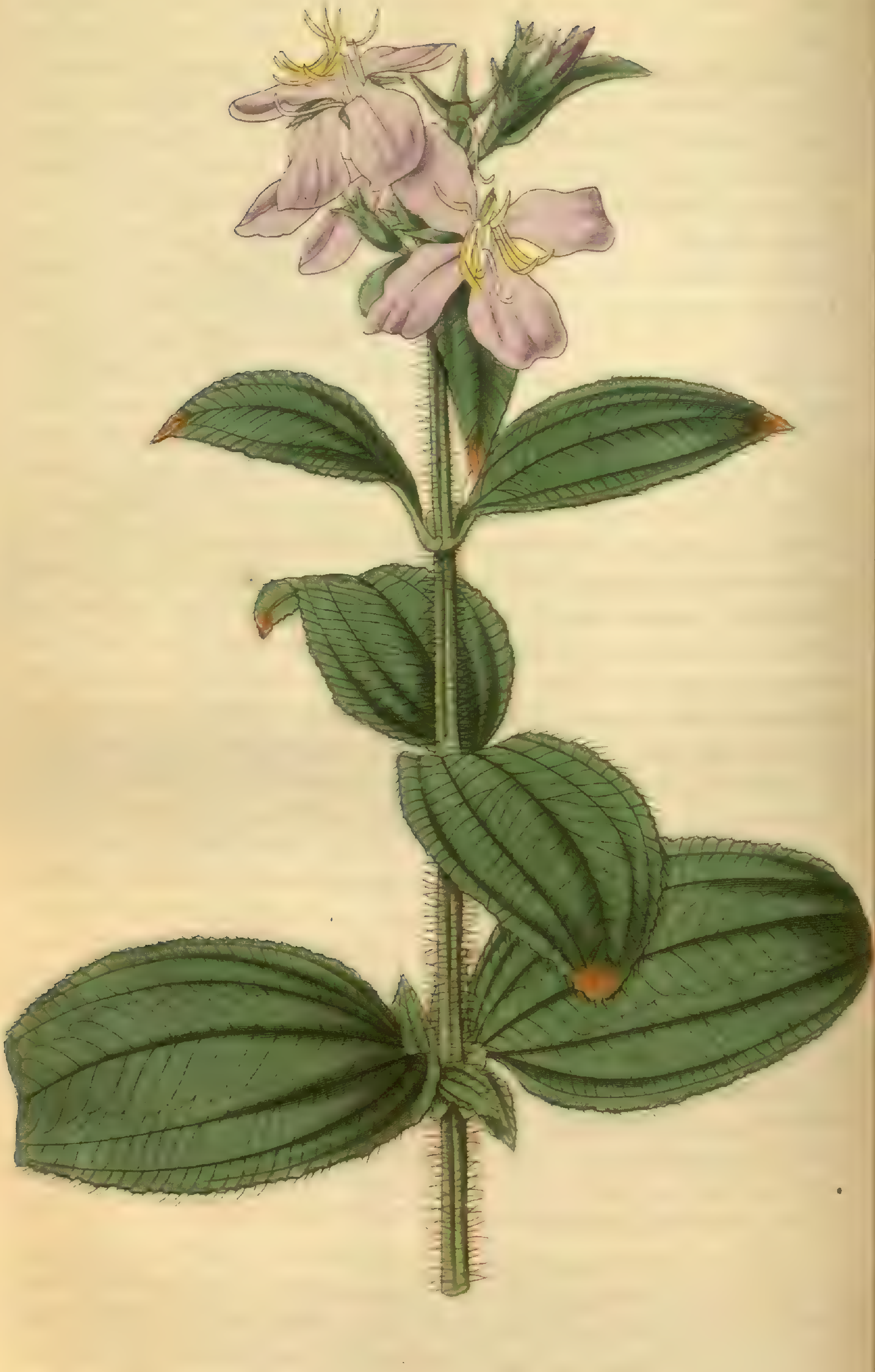
flowers smaller than those of our European *Bird Cherry*, fragrant (SWARTZ). *Pedicels* bracteated at the base; *bracteæ* very small. *Calyx-tube* turbinate with five furrows, orange-coloured within; *teeth* of the *limb* small, patent. *Petals* almost orbicular, waved, at length reflexed, with scarcely any claw. *Stamens* twenty, spreading, inserted at the margin of the tube. *Germen* ovate, gradually tapering into a slender *style*. *Stigma* spreading. *Drupe* nearly spherical, about as large as that of the common Bird Cherry, dark, almost blackish-purple: *Nut* of the same shape as the fruit, wrinkled, with a broad scar.

I find by LOUDON'S Hortus Britannicus, that CERASUS *sphærocarpa* was introduced to our stoves in the year 1820. No living plant, however, has come under my own observation: nor should I have deemed it deserving of being figured in the Botanical Magazine, under these circumstances, slight as are its pretensions on the score of beauty, were it not a plant, of which no satisfactory figure exists; and which may at the same time be reckoned an œconomical one. In the preparation of *Noyau*, probably several different vegetables are employed, which contain prussic acid. A species of *Bind-weed*, the CONVOLVULUS *dissectus*, abounds in prussic acid, and to that degree, as Dr. NICHOLSON of Antigua informs me, that "if this medicine shall be found deserving of the high character which some physicians have bestowed upon it, it may become valuable in a country, where the prussic acid cannot be preserved many days in a pure state." Hence this is a frequent ingredient in the preparation of Noyau. But we are natually led to expect prussic acid in plants of the *Plum* tribe; and Dr. SWARTZ assures us, that the bark of the PRUNUS (CERASUS) *Occidentalis* of the West Indies, on account of its peculiar taste and smell, is used instead of that of the AMYGDALUS *Persica (Peach)*; and of the P. *sphærocarpa*, he says, that the kernel of its nut resembles in taste that of the *Bitter Almond*. Mr. GUILDING observes, that the bark, leaves, and kernel have the smell and taste of those of the Peach, and they are employed by French colonists in the manufactory of Noyau.

This kind of Cherry inhabits Jamaica, and St. Domingo, according to SWARTZ: and the Antilles generally, according to Mr. GUILDING. Our drawing was made in the island of St. Vincent. If SPRENGEL be correct in referring the PRUNUS *brasiliensis* of SCHOTT to this species, it would appear to be a native of Brazil also.

Fig. 1. 2. Flowers. 3. Pistil, *magnified*. 4. Drupe, and f. 5. Nut, from the Drupe; *nat. size*.

3142



Dr Greville delt

Pub by S. Curtis Glazenwood Essex Mar 1.1832

ARTHROSTEMMA NITIDA. SHINING ARTHROSTEMMA.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—MELASTOMACEÆ.)

Generic Character.

Cal. tubus turbinatus campanulatusve sæpe pilis setis squamisve vestitus; lobi 4 lanceolati persistentes; appendices inter lobos nullæ? *Pet.* 4. *Stam.* 8, filamentis glaberrimis: *antheræ* oblongæ 1-porosæ connectivo longiusculo basi obtuse biauriculato. *Ovarium* apice setosum. *Capsula* 4-locularis. *Sem.* cochleata.—Herbæ *aut* suffrutices *habitu subvarii, omnes Americani. D. C.*

Specific Character and Synonyms.

ARTHROSTEMMA* *nitida;* caule suffruticoso erecto ramulisque patulis tetragono alato pilis coloratis patulis hirsutissimo, foliis ovatis acutis serrulatis utrinque glabris superne nitidis nervis inferne glanduloso-hispidis, pedunculis versus apices ramorum axillaribus petiolo longioribus trifloris, petalis obovatis retusis antheris dissimilibus, connectivo brevè biauriculato. *Graham.*

ARTHROSTEMMA nitida. *Graham, in Ed. N. Journ. of Sc. Dec.* 1831.

DESCR. *Root* perennial. *Stem* erect, suffruticose, quadrangular, with a narrow wing at each angle, red near the bottom, green above, hispid, hairs red, harsh, glandular, tumid at the base, tufted, longer and coarser in the same verticel with the leaves. *Branches* spreading, ascending. *Leaves*

---

* From αρθρον, *a joint,* and στεμμα, *a crown,* perhaps in allusion to the crown of anthers, which are as it were jointed upon the filaments.

Leaves (three inches long, two broad) decussated, ovate, acuminate, five-ribbed, much veined and wrinkled, dark green and shining above, paler below, petioled, glabrous excepting on the lower surface of the nerves and veins, which is glanduloso-hispid; petioles short, suberect. *Flowers* collected at the extremities of the shoots, where they arise from the axils of diminished leaves, peduncled; peduncles in structure and form like minute branches, about twice as long as the petioles, three-flowered, pedicels nearly awanting. *Bracteæ* single on the outside of each of the lateral pedicels, and two small, opposite, at the base of the calyx, showing a tendency to a farther subdivision of the inflorescence, ovato-elliptical, glabrous, ciliated, nerved. *Calyx* nearly cylindrical, glanduloso-hispid, indistinctly ribbed; *limb* four-parted, segments spreading, deltoideo-acuminate, ciliated, ciliæ glandular. *Corolla* pale lilac, petals distant, obovato-elliptical, retuse, faintly nerved. *Stamens* eight, inserted alternately within and between the petals into the mouth of the calyx; *filaments* colourless, erect, glabrous, flattened, slightly declined, about half the length of the petal; *anthers* in the bud bent forward, compressed dorsally, the larger passing between the calyx and ovarium, and having their apices lodged in cavities on the outside of this, when expanded compressed laterally, and wrinkled in front, bent at an acute angle with the filaments, arched, their apices ascending, perforated with a single pore, connective with two short, blunt auricles at the base, unequal, four large and brownish-yellow, four small yellow, more erect. *Stigma* minute, divided transversely, pubescent. *Style* rather longer than the filaments, declined, ascending at the apex. *Germen* free above, adhering below, having a few hairs upon its apex, four-celled. *Ovules* numerous.

This plant was raised at Mr. NEILL's garden, Canonmills, from seeds, sent to him in 1829, by Mr. JOHN TWEEDIE, formerly head-gardener at Eglinton Castle, Ayrshire, and now of the Retiro, Buenos Ayres. The packet was marked in Mr. TWEEDIE's handwriting, "Herbaceous Melastoma, from damp woods of the Banda Oriental." The plants came up freely in the summer of 1830; but none showed flower till July, 1831, when several blossomed equally well in the cold frame and in the greenhouse. *Graham.*

For the beautiful drawing here figured, I am indebted to Dr. GREVILLE.

W J H delt

Pub by S. Curtis Glazenwood Essex Mar 1. 1832

(3143)

DORONICUM CAUCASICUM. CAUCASIAN LEOPARD'S BANE.

****

Class and Order.

SYNGENESIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum nudum. *Pappus* simplex. *Involucri squamæ* duplicis ordinis, æquales, disco longiores. *Semina* radii pappo destituta.

Specific Character and Synonyms.

DORONICUM * *Caucasicum ;* foliis cordatis dentatis radicalibus petiolatis, caule simplicissimo monophyllo unifloro. *M. Bieb.*

DORONICUM Caucasicum. *M. Bieb. Fl. Taur. Cauc. v.* 2. *p.* 321.

DESCR. The *root* constitutes an oblong, creeping *tuber*, or *rhizoma*, throwing out fibres from beneath, and *leaves* and *stems* above. The latter are, even in the cultivated specimen, scarcely a foot high, slender, and as well as the rest of the plant, almost entirely glabrous. A few membranous scales surround the base of the stem, on a cluster of root-leaves where no stem appears. *Leaves* an inch and a half long, cordate, obtuse, repando-dentate, having a deep sinus at the base: those arising from the root or near the root, are upon long *petioles*, and if inserted a little above the base of the stem, the petiole is auricled on each side at the base. One leaf near the middle of the stem is entirely sessile. *Flower* terminal, solitary, almost exactly resembling that of D. *pardalianches*.

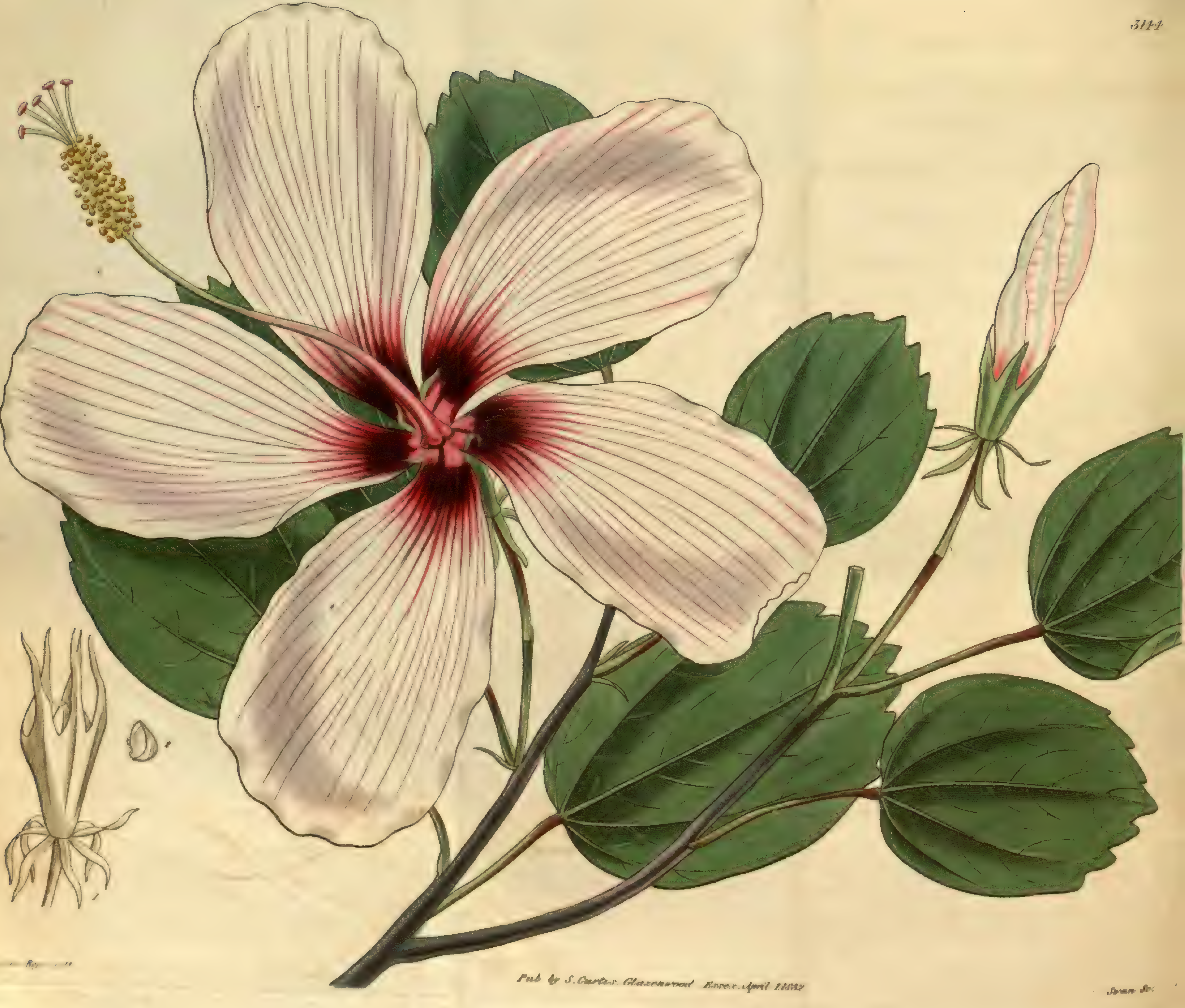
---

* From δωρον, *a gift*, and νικη, *victory*, because it was said to be employed formerly to destroy wild beasts.

D. *Caucasicum* is a native of the Caucasian Alps, according to M. Bieberstein, and has been introduced to our gardens by Dr. Fischer of St. Petersburgh. It succeeds with us in the open air, and flowers in April. We have hitherto kept it in pots, where it increases readily by its roots.

Fig. 1. Floret from the Circumference. 2. Floret from the Centre: *magnified.*

3144



Pub by S. Curtis. Glazenwood Essex. April 1 1832

Swan Sc.

(3144)

HIBISCUS GENEVII. LARGE PURPLE-EYED HIBISCUS.

****

Class and Order.

MONADELPHIA POLYANDRIA.

(Nat. Ord.—MALVACEÆ.)

Generic Character.

Calyx cinctus involucello sæpius polyphyllo, rarius foliolis paucis aut inter se coalitis. *Petala* hinc non auriculata. *Stigmata* 5. *Carpella* in capsulam 5-locularem coalita, valvis intus medio septiferis, loculis polyspermis aut rarius 1-spermis. *D. C.*

Specific Character and Synonyms.

HIBISCUS *Genevii;* arborescens, inermis, foliis subrotundo-ovatis basi integris versus apicem grosse serratis 5-nerviis glabris, calyce 5-fido, involucellis 8-phyllis, (floribus speciosis albis fundo purpureis), petalis cuneatis glabris patentibus, seminibus appresso-pilosis. *Bojer.*

HIBISCUS Genevii. *Bojer, in Mém. sur une nouv. esp. d'Hibiscus, lu à la Soc. d'Hist. Nat. de Maurice.*

DESCR. *Stem* fourteen to fifteen feet high, clothed with a smooth, grey *bark*. *Branches* lax, erecto-patent, rounded, the younger ones tinged with red, or dotted with warts. *Leaves* alternate, petioled, roundish, or approaching to oval, two inches or more long, the apex with unequal, acute teeth, deep green, glabrous on both sides, the *nerves* five, prominent beneath, continuous from the apex of the petiole, the lateral ones less distinct. *Petioles* rounded, scarcely longer than the leaf, thickened upwards, sometimes coloured, at the base having a pair of setaceous, deciduous *stipules*. *Peduncles* axillary, solitary, single-flowered, jointed in the middle, glabrous. *Calyx* ample, campanulate, with five, long teeth. *Leaflets* of the *involucellum* linear, reflexed, longer than the tube of the calyx, persistent. *Corolla* spreading, five inches in diameter. *Petals* entire, sometimes slightly waved, obovato-cuneate, radiant but in a contorted direction, in the bud spirally convolute, white or pale rose-color, deep purple at the base, quite glabrous. *Style* declined, a little longer than the petals, green; purple below, five-cleft at the top. *Stigmas* five, capitate, purple, hairy. *Anthers* yellow, on short, distinct *filaments*. *Fruit* a clavate, five-celled *capsule*, with five many-seeded *cells* bursting longitudinally, and surrounded by the persistent calyx. *Seeds* subtrigonal, convex on the back, clothed with densely-appressed hairs. *Bojer*.

This superb HIBISCUS, Professor BOJER had long known as an inhabitant only of the gardens of cultivators: but lately, he says, " having made an excursion to the *Rivière noire*, and stopped at the house of M. GENÉVE, a zealous cultivator, with whom I remained some days, occupied in examining the curious plants in his garden, when my attention was struck by the languid appearance of this HIBISCUS, which M. GENÉVE assured me that he had been in the habit of seeing in the forests of the *Rivière noire*, and of transporting to his garden for a period of twenty years; but that he could never cultivate it with success. The next day he conducted me to the mountains, where I found many trees of the HIBISCUS, of considerable size, and covered with flowers: and where I made on the spot my drawing and description." Professor BOJER has distinguished it by the name of his intelligent host, to whom we are indebted for the discovery of its place of growth.

If this shrub be not already in our collections, as I suspect it is, through the influence of Mr. TELFAIR and the late Mr. BARCLAY, cultivators should hasten to procure what would prove so great an ornament to the stove.

M. BOJER refers it to the " CREMONTIA" tribe, notwithstanding that the *corolla* is not " *convoluto-cylindracea*," where it ranks with H. *liliiflorus*, *Boryanus*, and *fragilis*, all natives of the Mauritius as well as of Bourbon.

Fig. 1. Fruit. 2. Seed: *nat. size.*

W. Scott delt

Pub by S. Curtis Glazenwood Essex April 1 1832

Swan S

POLYGONUM ADPRESSUM. BERRY-BEARING POLYGONUM, OR MACQUARIE-HARBOUR GRAPE.

Class and Order.

OCTANDRIA TRIGYNIA.

(Nat. Ord.—POLYGONEÆ.)

Generic Character.

Perianthium monophyllum, divisum, æstivatione imbricata. *Stamina* definita, imo perianthio inserta. *Antherarum* loculi longitudinaliter dehiscentes. *Ovarium* liberum, monospermum, ovulo erecto. *Styli* vel *Stigmata* plura. *Nux* nuda, vel perianthio tecta. *Albumen* farinaceum, raro subnullum. *Br.*

(DIV. HELXINE, *Foliis cordatis, Stylis 3-partitis, Nucibus angulatis, Staminibus* 8, *Floribus sæpe polygamis.) Br.*

Specific Character and Synonyms.

POLYGONUM* *adpressum ;* glabrum, caule volubili v. prostrato suffruticoso ramisque teretibus, foliis cordatis subacuminatis crenulatis margine scabris, racemis axillaribus terminalibusque, bracteis ochreisque nudis, perianthiis subbarbatis, floribus polygamis. *Br.*

POLYGONUM adpressum. *Labill. Fl. Nov. Holl. p.* 99. *t.* 127. *Br. Prodr. Fl. Nov. Holl. p.* 420. *Spreng. Syst. Veget. v.* 2. *p.* 254.

DESCR. " *Plant procumbent,* with a somewhat striated and rounded, flexuose *stem.* *Leaves* acuminate, cordate, some of them suborbiculate ; the *petioles* glandulose beneath at the base, the *stipules* opposite to these, ovato-lanceolate, half-sheathing, glabrous, membranaceous, pale red. *Flowers* polygamous : the *male* mixed with *hermaphrodite* ones, in simple, axillary *racemes* shorter than the leaves. *Calyx,* in the hermaphrodite flowers, quinquepartite, persistent, the segments ovate, obtuse, concave. *Corolla* none. *Filaments* of the *stamens* eight, inserted at the bottom of the calyx, by the pressure of the germen compressed, as are the ovate, nearly sterile, imperfectly-formed, and minute *anthers*. *Germen* superior, ovate, retuse. *Styles* three, subfoliaceous, dilated, crenulated, reflexed, appressed to the germen: *Stigmas* simple, acute. *Seed* solitary, crowned with the appressed *styles*, and covered by the persistent, turbinate, obsoletely triquetrous *calyx*, which is marked with six striæ. *Embryo* unilateral, cylindrical, white, *albumen* farinaceous, very white. *Calyx* in the male flowers, as in the hermaphrodite: but the *filaments* of the stamens are cylindrical: *anthers* oblong, versatile." *Labill.*

---

* From πολυς, *many,* and γονυ, a *knee* or *joint ;* in allusion to the knots or joints in the stem.

Native plants, bearing esculent fruits, are so rare in Australia, that the figure of one, scarcely known even in our Herbaria, and not yet cultivated among us, may not be unacceptable in the pages of the Botanical Magazine. Dr. Wilson has lately been kind enough to present us with some beautiful drawings, made by Dr. J. Scott in Van Diemen's Land; and amongst them is this, called by the colonists, the "*Macquarie-Harbour Grape*:" but which, though its fruit at first sight bears no distant resemblance to that precious plant, and is borne on stems which ramble like a vine, and extend during a single season even to the length of sixty feet, belongs to a widely different family, namely, to our *Bistorts* and *Buck-Wheats*. The fruit, or seed as it is commonly called, is known to be wholesome in the whole Genus, and is, in fact, a small, hard nut: but in this remarkable species, it is invested with the enlarged and fleshy segments of the calyx; thus giving each fruit the appearance of a berry. Again, we know that in this tribe, an acid and astringent principle is found, which exists in the fruit; and thus, as Dr. Scott observes, it is used in tarts.

From the figure of Labillardiere (whose description I have been under the necessity of copying in the absence of good specimens) our plant will be found to differ in no small degree: but Mr. Brown observes, that it is a very polymorphous species, closely allied and certainly a congener with Coccoloba *Australis, Forster*. Dr. Meisner indeed refers our species to Coccoloba, on account of its fleshy covering: but its habit is entirely that of a Polygonum. Dr. Scott says, that in Van Diemen's Land, the plant is peculiar to Macquarie's Harbour, and that it ripens its fruit in December and January. Mr. Brown gives it as an inhabitant also of Port Jackson and the Southern shores of New Holland.

Fig. 1. Fruit bursting: *nat. size.*

3146.

Pub by S. Curtis Glazenwood Essex April 1 1832.

Swan Sc.

MAXILLARIA TETRAGONA. FOUR-CORNERED MAXILLARIA.

****

Class and Order.

GYNANDRIA MONOGYNIA.

(Nat. Ord.—ORCHIDEÆ. Div.—VANDEÆ. *Lindl.*)

Generic Character.

Perianthium patens, resupinatum. *Labellum* cum processu unguiformi columnæ articulatum trilobum. *Foliola* lateralia *exteriora* basibus cum processu columnæ connata. *Pollinia* 4, basibus connata, glandulosa, (vel 2, pedicellata, pedicello basi glutinoso).—Herbæ *parasiticæ, bulbosæ, Americæ meridionalis.* Racemi *(vel* scapi *uniflori) radicales. Lindl.*

Specific Character and Synonym.

MAXILLARIA * *tetragona ;* pseudo-bulbis ovatis tetragonis, foliis oblongo-lanceolatis plicatis solitariis, floribus radicalibus (vel racemosis), sepalis oblongis obtusis patulis, petalis conformibus paulo minoribus, labello carnoso ventricoso trilobo erecto, lobis lateralibus parvis acutis intermedio ovato extus convexo, disci appendice carnoso tabulari incumbente. *Lindl.*

MAXILLARIA tetragona. *Lindl. in Bot. Reg. t.* 1428.

DESCR. Parasitic. *Bulbs* clustered, ovate, subacuminate, wrinkled, compressed, four-angled, bearing a single ovato-lanceolate, plicato-striated leaf at the extremity, slightly wavy at the margin. From the base of the bulbs, among the roots, arises a short *scape,* clothed at its base with sheathing *bracteas* or scales, and bearing three or four *flowers* of large size, and very fragrant, resembling, ac-

---

* For the derivation, see tab. 2927.

cording to Mr. Lindley, fresh violets, and each borne upon a long, cylindrical or subclavate, slightly twisted *germen*. The *outer segments* of the flower, or *sepals*, are broadly ovate, acute, reflexed, the two *lower* decurrent, and meeting below so as to form a distinct *spur* : the two *inner* ones smaller, but similar in shape: all of them of a brownish-green colour, tinged and streaked with purple. *Lip*, in our specimen, nearly white, with purple blotches, oblong, ventricose, fleshy, three-lobed, the two lateral lobes involute, acute : the middle one cordate, acute, " within, the *labellum* is highly curious, having a large, fleshy, deep purple body which gradually passes into the labellum at the lower margin ; but anteriorly, it projects into a distinct lobe, resembling a shovel, glued to the face of the labellum" (Lindl.); a peculiarity which our drawing does not represent. *Column* and *anther-case* yellow-green.

This beautiful plant is a native of forests in Brazil, whence it was imported by John Mutford, Esq. of Exeter, in 1827, and presented to the Royal Gardens of Kew, where it flowered in great perfection in July, 1829. It is unquestionably the same species with that above quoted in the Botanical Register, but the scape bears three or four flowers, and the *labellum* is nearly white, which in Mr. Lindley's plant is yellow green.

I am indebted to Mr. Aiton for the use of the drawing which is here engraved.

Fig. 1. Lip. 2. Column, with the Anther-case, thrown back and exposing the Pollen-Mass.

Pub by S Curtis Glazenwood Essex April 1 1832

(3147)

LISSANTHE SAPIDA. ESCULENT LISSANTHE.

* * *

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Cal. bibracteatus vel ebracteatus. *Cor.* infundibuliformis, limbo imberbi. *Ovarium* 5-loculare. *Drupa* baccata, putamine osseo solido. — Fruticuli *erecti.* Folia *sparsa, subtus lineata.* Flores *inter minores, albi.* Discus hypogynus *cyathiformis, 5-lobus. Br.*

Specific Character and Synonyms.

LISSANTHE[*] *sapida;* racemis 2—3-floris recurvis, foliis oblongo-linearibus mucronatis margine revolutis, subtus dealbatis striatis. *Br.*

LISSANTHE sapida. *Br. Prodr. v.* 1. *p.* 540. *Lindl. in Bot. Reg. t.* 1275.

DESCR. A *shrub,* with rounded, subpubescent, brownish *branches. Leaves* scattered, an inch and a half to two inches long, linear-lanceolate, coriaceous, rigid, entire, acuminate and cuspidate at the point, the base suddenly tapering into a very short *petiole,* upon which it is, as it were, jointed, and often bent at an angle from it, the upper surface obscurely, the under surface, which is almost white, distinctly striated. *Racemes* axillary and terminal, of from three to five *flowers:* the *pedicels* and *peduncle* bracteated, the *bracteæ* often four in a whorl. *Calyx* of five imbricated *leaves,* which are ovato-rotundate, coriaceo-membranaceous,

---

[*] λισσος, *smooth,* and ανθος, *a flower:* from the smooth or polished surface of the flower.

margined with red. *Corolla* of one campanulato-cylindraceous *petal*, greenish-white, polished, swollen at the base, the *limb* cut into five acuminated, spreading segments: within the tube and near the middle is a circle of hairs. *Filaments* five, completely adnate with the corolla. *Anthers* alternate with the segments, at the mouth of the tube, oblong, dark-purple, one-celled, bursting longitudinally. *Germen* ovate, five-celled, nearly half-immersed in a cyathiform *disk*, irregularly and obscurely lobed at the margin. *Style* as long as the tube of the corolla, swollen above the base, and hairy. *Stigma* obscurely five-lobed. *Berry* a globose *drupe*, as large as a black currant, red, tipped with the persistent style. The nut five-lobed, five-celled.

Introduced into the country from New South Wales by Mr. ALLAN CUNNINGHAM, who sent seeds of it to the Royal Gardens of Kew in 1823. These produced flowering plants in October 1825, and, in May 1827, the same plants bore the bright-coloured fruits which are said in the "Library of Entertaining Knowledge" to have "something of the consistency and taste of the Siberian Crab."

I am indebted to W. T. AITON, Esq. for the drawings and specimens of this plant, from which our figure and description were made.

Fig. 1. Calyx. 2. Corolla laid open. 3. Pistil and cyathiform Disk: *magnified.*

3148

W. J. H. del^t

Pub by S. Curtis Glazenwood Essex April 1 1832.

Swan sc.

THEA VIRIDIS. GREEN TEA.

****

Class and Order.

POLYANDRIA MONOGYNIA.

(Nat. Ord.—CAMELLIEÆ.)

Generic Character.

Cal. 5—6-sepalus. *Pet.* 6—9 ima basi subcohærentia 2—3-serialia. *Stam.* basi sublibera. *Antheræ* subrotundæ. *Capsula* 3-cocca, septis valvaribus nempe a valvularum marginibus introflexis formatis. *De Cand.*

Specific Character and Synonyms.

THEA* *viridis:* foliis elliptico-lanceolatis coriaceo-membranaceis convexis undulatis, floribus solitariis nutantibus.
THEA viridis. *Linn. Sp. Pl. p.* 735. *Willd. Sp. Pl. p.* 1180. *Sm. in Rees' Cycl. Loddiges Bot. Cab. t.* 227. "*Letts. Monogr. t.* 1." *Woodv. Med. Bot. Suppl. p.* 116. *t.* 256. *Booth, in Trans. of Hort. Soc. of Lond. v.* 7. *p.* 558.
BOHEA laxa. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 303.
THEA Chinensis, α. *Sims in Bot. Mag. p.* 998. (which see for the Synonyms of the *var.* β in other authors.) *De Cand. Prodr. v.* 1. *p.* 530. *Spreng. Syst. Veget. v.* 2. *p.* 603.

DESCR. A *shrub,* rising to the height of eight or ten feet in the conservatory of the Botanic Garden of Glasgow, much branched, the *branches* spreading, rounded, brown, the young shoots green. *Leaves* rather distant, alternate, on short petioles, elliptical-lanceolate, three to five inches long, coriaceo-membranaceous, waved and wrinkled, convex the margins being recurved, serrated, of a full (but not a black-) green above, paler beneath, where the *midrib* and *veins* are prominent. *Flowers* solitary, axillary, fragrant, seldom more than one, and that from near the top of each shoot, upon a short *peduncle,* drooping, so that the flower is scarcely to be seen but by looking at the underside

---

* From the Chinese name of the plant, *Tcha.*

side of the branches. *Calyx* of five rounded, spreading, green leaves. *Corolla* of usually six, between oval and rounded, white, spreading *petals,* in two or three series, of which the outer are the smallest and greenish, the inner gradually larger, and of a clearer white, slightly wavy. *Stamens* very numerous, fixed to the base of the petals, so that in fact there are several bundles, though, from their proximity, they seem to form one mass. *Filaments* slender. *Anthers* rotundato-reniform, opening at the sides, yellow. *Germen* ovate, downy, surrounded by a fleshy ring at the base, slightly downy, three-celled, each cell containing two *ovules.* *Styles* three, combined below, free above: *Stigmas* obtuse.

Of the Tea-plant, two kinds are commonly cultivated in our greenhouses, the one under the name of THEA *viridis,* or *Green Tea,* the other of THEA *Bohea,* or *Black Tea:* and which appellations have been given them, partly, as it would appear, on account of the relative colours of the foliage, and partly under an impression, that the former produced the *Green Tea* of the shops, and the latter the *Black Tea.* But this idea seems to be founded on no good authority, as we shall presently show; and even with regard to T. *viridis* and T. *Bohea,* Botanists are by no means agreed as to their specific identity: indeed, a general opinion now prevails that they are mere *varieties*; an opinion, however, in which I do not coincide. T. *viridis* is a large, strong-growing, almost hardy, plant, with its branches spreading, its leaves three to five inches long, very broadly lanceolate, pale green, singularly waved, the margin reflexed; the flowers are large, solitary, mostly confined to the upper axil: they appear in the autumn, six weeks or two months earlier than those of T. *Bohea:* whilst the latter is of smaller size, with remarkably erect, stiff branches, leaves not above half or two-thirds the size of the former, perfectly flat, more coriaceous, of a dark green, bearing in the axils of numerous leaves two or three flowers, which are smaller, and have a slight fragrance, and are in perfection during winter. It will not endure our frosts. Both kinds are indeed so frequent in our collections, that every one has the opportunity of examining them, and exercising his own judgment as to the importance of their characters. The difficulty is much greater in determining which of these species is the one cultivated in China; whether both may not be employed in the production of the different kinds of Tea; or whether they may not be indiscriminately used:—for the Chinese are exceedingly jealous over the processes employed in the preparation of Teas, and the Tea-country being at a great distance from the European Factory, it is very doubtful if any scientific person has, from personal observation, been able to decide the question. An assertion is, indeed, (and, perhaps, rather too hastily,) made, in the " General System of Gardening and Botany," namely, " that *all* the different kinds of Teas brought to this country from China are the produce of THEA *viridis* :" and, again, under THEA *Bohea,* " this is falsely called *Bohea Tea,* as we find the Bohea Teas of the shops as well as other kinds, both green and black, to be the leaves of the former species" (T. *viridis*). Dr. ABEL * satisfactorily notices the two kinds of Tea-plant under consideration, and he adds, " from persons conversant with the Chinese method, I learnt, that either of the two plants will afford the *black* or *green Tea* of the shops; but that the broad, thin-leaved plant (our T. *viridis,*) is preferred for making the *green Tea.*" This statement is corroborated by a communication from my valued friend CHARLES MILLETT, Esq. of Canton, who holds a high official situation in the Company's Factory there, and to whom I wrote to request information on the subject. " The Tea-plant," he says, in a letter, dated Canton, 12th December, 1827, " is almost as scarce in this neighbourhood as it is in England. The Tea-country is at a great distance from hence, and the Teas brought to Canton are several months on their route by inland navigation. Of the plants there are two kinds ; of which, one has a leaf of a much darker green than the other. This difference may partly arise from cultivation : but it is to the various modes of preparation, that the green and the black Teas (as they are called in England) of the shops are due. In proof of this, we sent home last year *green Tea* from the *black Tea-plant.* You may, therefore, conclude that, though there are two plants, differing as much in appearance and growth as any two varieties of the CAMELLIA *Japonica,* each, by proper management, will produce *black* or *green Tea* indifferently. The varieties of *Teas,* from the several provinces, arise from soil, culture, mode of preparation, and, above all, from the part of the shrub whence the leaves are pulled. From the same individual plant, indeed, there are three crops or gatherings annually ; the first affords the finer *Teas,* of which the *Pourchong* is the produce of the larger leaves of the young shoots. The extreme shoots, with the opening leaf-buds, constitute the *Peko.* This is in England commonly supposed to be the *flowers*: but an examination after infusion will clearly show its origin. The first picking takes place in June, the second in July, and the third in August."

---

* Narrative of a Journey to the Interior of China, p. 221. *et seq.*

I may add, that Kæmpfer's figure of the Japanese Tea-plant, which is evidently the plant in general cultivation in that empire, is the T. *Bohea*, not the T. *viridis*.

The native country of both the species is, probably, various parts of China, and the cultivation seems to be confined to the temperate zone, extending to the northern provinces of the empire, and as far as the 45° of lat. in Japan. But the *Tea-districts*, properly so called, are thus stated by Dr. Abel: that of the green Tea is in the province of Keang-nan, between the 29° and 41° of *N. lat.*, at the North-western base of a ridge of mountains, which divides the province of Che-keang and Keang-nan:—the *Black-tea district*, in the province of Fokien, is contained within the 27th and 28th degrees of *N. lat.*, and is situated on the South-eastern declivities of a ridge of mountains dividing the province of Fokien from that of Keang-si.

The different kinds of Tea of commerce, as known to us in Europe, are not very great; but M. A. Baron de Schilling has given the names of thirty-six sorts, copied from a Chinese MS in his possession. These are divided into seven heads. 1. Teas of the district of the city of Souugan-tcheon in the province of Kiang-nan, eight sorts. 2. Green Teas, Soung-lo of the district of the city of Hoey-tcheon, in the province of Kiang-nan Soung-lo, eleven sorts. 3. Teas of the district of Hang-tcheon-fou, in the province of Tehe-kiang, five sorts. 4. Tea of the province of Hou-kouang, one sort. 5. Black Teas, Wou-y, or Bohea, of the province of Fou-kian, ten sorts: and which, if we may judge from the names, are among the most esteemed—such as, *Lao kiun mei*, or venerable old man's eye-brows: *Pekao*, white hairs, or Peko Tea: *Cheou mei*, eye-brows of a very advanced age: *Kieou khin lian sin*, hearts of Water Lilies of Kieou khin: *Ouang nin fung*, Tea of the pick-axe of the king's daughter: *Ta haung phao*, large red tails: and *Sian jin tchang*, palm of the immortals, &c. 6. Tea of the province of *Yun-nan*, one sort. 7. Teas of the province of Szu-tchhouan, two kinds. But this list, it is said by the editor of "Abel Rémusat," is not yet complete; and he adds fifteen others, several of which appear to be the kinds best known in Europe: Wou-i-tchha, *Wou-i Tea*. Wou-i is the name of a celebrated mountain, in the province of Fou-kian; thence comes the common name of *Bohea Tea*. Hi-tchun-tchha, *Hyson Tea*. Phi-tchha, *Skin Tea:* it is that species of Hyson Tea commonly called *Skin.* Siao-tchoung-tchha—a small kind, the Saotchoun or *Souchong* of the merchants. Pao-tchoung-tchha—a species sold in small packets; the *Pouchong* of commerce. Soung-tseu-tchha, *Sonchais Tea.* Koung-fou-tchha, *Camphon,* or *Congo Tea.* Chang-koung-fou, *Camphon Tea* of a higher quality, or *Camphon Campony.* Tchu-tchha, *Pearl Tea.* Ya-toung-tchha, *Winter Tea.* Tun-ki-tchha, *Twankay Tea.* Kian-peü-tchha, or Tseu-tchoung; a second species of *Campony Tea.* On-tchha, *Black Tea*—the leaves serve to dye stuffs black. Ye-tchha, *Desert Tea.*—The flowers of this species of Tea are of a golden colour; the stem is high, and the leaves of a bright green: they use it in the same manner as the common Tea. Chan-tchha, *Mountain,* or *Wild Tea.*

All these different kinds of Tea may be distinguished by the experienced merchant, merely by the taste. The situation of Assayer of Teas at Canton requires this sort of talent, and the individual who holds it, enjoys a salary of £1,000 per annum for tasting Teas only.

The quantity of Tea produced in China must be enormous; for with the exception of Japan, a province of China, it has not been found practicable, though often attempted in Brazil and elsewhere, (and mainly on account of the higher price of labour,) to cultivate it to advantage any where but in China proper: and there, the Tea-plant is spread, and not very thinly spread, over a square area of 1,372,450 square miles. It is now a common beverage throughout the whole civilized world. Its use in China reaches to a very high antiquity. An Indian prince, according to the Japanese, a holy and religious character, of the name of DARMA, visited China, about the year 516 of the Christian æra, with the view to instruct the natives in the duties of religion. He led himself a life of great abstinence, and denied all manner of rest or relaxation to his body: but he was at length so weary of his fatigues and fasting, that he fell asleep. As a penance for so great a dereliction of duty, he cut off both his eye-brows, the instruments and ministers of his crime, and threw them upon the ground: each eye-brow became a shrub, and that shrub the one now called Tea, whose virtues were till then as unknown to the world as the plant itself. DARMA quickly discovered the agreeable properties of the foliage, which endowed his mind with fresh powers to pursue his divine meditations. Having recommended the use of it to his disciples, it soon became general in China, and has now extended to the remotest regions of the earth: while the individual who first discovered its qualities is held in remembrance by a rude figure in Chinese and Japanese drawings, of an old man standing upon water, with a reed under his feet, and one of his eye-brows sprouting out into a Tea-leaf.

LINSCHOT is said to be the first traveller, who tells of a herb, with which the Japanese prepare a drink, and which they offer to their guests as a mark of high consideration. CASPAR BAUHIN speaks of it in his "Pinax," under the name of *Cha.* It was very early in the seventeeth century that Tea first became known in Europe; and we are assured, that the Dutch at first carried on a trade, by recommending the *Sage* of this country, which they gave in exchange for Tea of China. The use of the former soon ceased; while that of the latter daily increased among us. Little more than a century ago, according to Lord MACARTNEY, the English East India Company did not sell more than 50,000 ℔s. of Tea, and very little was smuggled. In 1784, the consumption of Great

Britain was estimated at 13,338,14 ℔s. Now, that of Great Britain and Ireland, exclusive of the dependencies, amounts to 28,000,000 ℔s.

Lords Arlington and Ossory brought home a quantity of Tea from Holland, about the year 1666, at which time it was sold for 60s. the ℔. But the practice of tea-drinking, even in public coffee-houses, was not uncommon in England prior to that period: for, in 1660, a duty of 8d. *per gallon* was laid on the liquor made and sold in all coffee-houses.

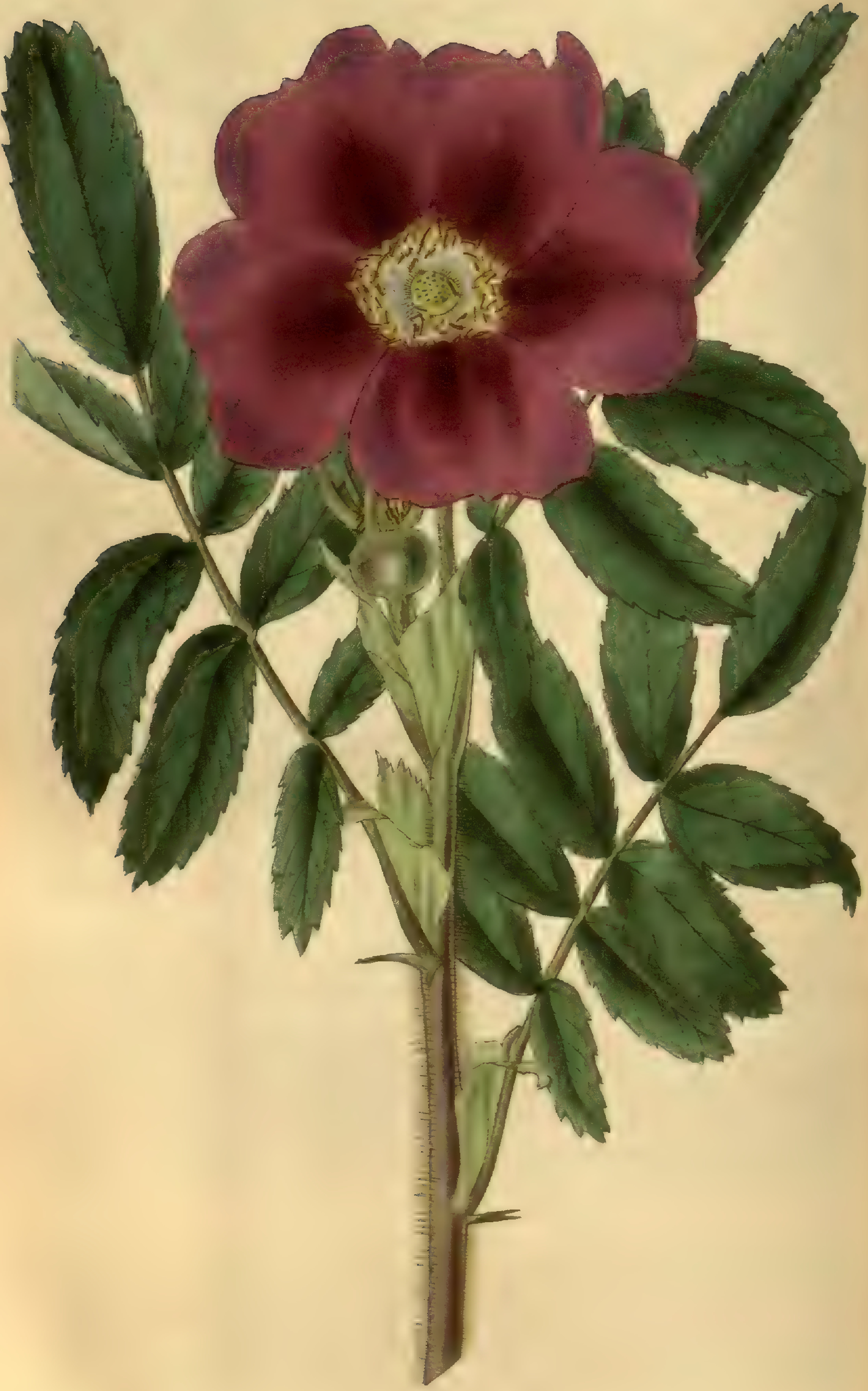
In the sister country of Scotland, a century elapsed before Tea was generally known. It has been stated, and we believe on the authority of Sir Walter Scott, as proving how long a time had passed before Tea came into general use in his native land, that people are yet living, who recollect how the Lady Pumphraston, to whom *a pound* of fine green Tea had been sent as a rare and valuable present, boiled the same, and served it up with melted butter, as condiment to a salted rump of beef, and complained, that no cooking that she could contrive, "would make those *foreign greens* tender."

America carries on a vast trade in this article; but Russia is stated to rank next to Great Britain, inasmuch as 25,200,000 ℔s. of Tea are yearly imported and consumed by the Russians. Their trade with the Celestial Empire, as may be conjectured by the proximity of their territories, is by land; and it is said that, in consequence of it, the Tea is of a superior quality than that which has been subjected to a long voyage. It is sent from Russia to Germany, where it fetches a high price, under the name of *Caravan Tea.* But in Russia, a peculiar kind of Tea, not known in other parts of Europe, (and, indeed, in Russia, its consumption is confined to the Asiatic territories,) is *Brick Tea,* a term frequently made use of in the interesting travels of Ledebour in the Altaic Mountains, and which has been lately explained to me, and a specimen shown me by the Rev. William Swan, an intelligent missionary, who has resided for ten years at Setenginsk, in Asiatic Russia, where Brick Tea is in very general use among the Mongolian tribes and Bouriats. It is produced at Fokien, and consists of old or coarse damaged leaves and stalks, pressed into moulds, and dried in the oven. Of this a small quantity is taken, pounded in a mortar, and infused for a long time in boiling water before the infusion is ready, which, however, is too bad for the Chinese taste. The people above mentioned, generally add to it a little salt and milk, and sometimes flour fried in oil.

Linnæus had the honour of introducing this interesting and valuable plant alive to Europe: but not till he had experienced many disappointments. The seeds would never bear the voyage: for like all oily seeds, they turned rancid in a short time. His pupil Osbeck brought a plant as far as the Cape of Good Hope, where it was washed overboard during a storm. Lagerstroem conveyed two shrubs, for the true Tea, to Upsal; but they turned out to be *Camellia,* which the Chinese call by the same name; not distinguishing it (any more than some able European botanists) generically from Thea. Some time after, one reached the harbour of Gottenburg in good health: but the evening before landing, the captain set the plant on the table of his cabin, where it was eaten by rats. At length Linnæus advised Captain Ekeberg to sow the fresh seeds in pots of earth at the moment of his departure from China, so that they might vegetate after passing the line; and the growing plants were thus brought in safety to Gottenburg, the 3d of October, 1763, and transported to the Botanic Garden of Upsal.

Fig. 1. Flower.

3149.



Curtis del.

Pub. by S. Curtis Glazenwood Essex April 1.1832.

Swan

ROSA KAMTCHATICA. KAMTSCHATKA ROSE.

****

Class and Order.

ICOSANDRIA POLYGYNIA.

(Nat. Ord.—ROSACEÆ.)

Generic Character.

Calycis tubus urceolatus, carnosus, *achenia* plurima hirsuta includens. *Receptaculum* villosum. *Lindl.*

DIV. II. Feroces. *Rami tomento persistente vestiti. Fructus nudus. Lindl.*

Specific Character and Synonyms.

ROSA * *Kamtchatica ;* foliis rugosis opacis aculeis stipularibus et rameis valde inæqualibus.

ROSA Kamtchatica. *Vent. Hort. Cels. t.* 76. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 259. *Lindl. Monogr. Ros. p.* 36. *et in Bot. Reg. t.* 419. *De Cand. Prodr. v.* 2. *p.* 607. *Spreng. Syst. Veget. v.* 2. *p.* 546.

(β.) *nitens ;* foliis lucidis pallide viridibus. *Lindl. in Bot. Reg. t.* 824.

This is one of the many beautiful drawings executed by Mr. JOHN CURTIS for the Botanical Magazine, during the latter part of Dr. SIMS's editorship: and as I have not myself had the opportunity of seeing the plant from which it was made, I shall transcribe Professor LINDLEY's excellent description, given in the Botanical Register. " *Shrub* three to five feet high, loosely spreading ; *branches* trailing, cottony, with biformed, hairy prickles, those under the stipules falcate and distant, those upon the branch smaller, thickset, bristle-shaped, with thinly mingled bristles. *Leaves* wrinkled, opaque, thick-set ; *stipules* large, halved obversely,

---

* Derivation at Tab. 2847.

ovate, hairy, curled at the edge, here and there beset with glands; *petioles* cottony, without prickles; *leaflets* seven, simply serrated, with the teeth callously tipped, naked at the upper side, hairy and paler at the under. *Flowers* generally solitary, red; *bracteas* elliptic, nearly naked; *peduncles* naked, purple; *tube of the calyx* round, naked; *leaflets of the calyx* very narrowly triangular, furless on the outside, beset with glands, broader at the tip, longer than the petals; *petals* obversely cordate, tipped, ultimately flat. *Disk* raised, fleshy. *Ovaries* nearly naked; *styles* hairy, rather naked at the base: *mass of stigmas* conical, naked. *Fruit* globular, furless, scarlet, waxy, shorter than the calycine leaflets."

The species is a native of Kamtschatka, whence it was introduced to the gardens of Europe by M. CELS in 1802, and is a great ornament to them.

Our drawing was made from a plant in the garden of Mr. M'LEAY, of Tilbuster Lodge.

3150.

J Curtis delᵗ

Pub. by S. Curtis Glazenwood Essex April 1.1832.

Swan sc.

SIDA ROSEA. REDDISH GLOBE-FLOWERED SIDA.

* * *

Class and Order.

MONADELPHIA POLYANDRIA.

(Nat. Ord.—MALVACEÆ.)

Generic Character.

Calyx nudus, 5-fidus, sæpe angulatus. *Stylus* apice multifidus. *Carpella* capsularia, 5—30, circa axim verticillata, plus minusve inter se coalita, 1-locularia, mono- aut oligosperma, apice mutica aut aristata. *D C.*

Specific Character and Synonyms.

SIDA* *rosea;* caule fruticoso, foliis longe petiolatis cordatis acuminatis serratis molliter pubescentibus, pedunculis axillaribus unifloris, calyce inflato basi truncato, corollis subglobosis.

SIDA rosea. *Link et Otto in Ic. Pl. Select. Hort. Berol. t.* 71.

ROSA speciosa. *Willd. Herb. ex Spreng. Syst. Veget. v.* 3. *p.* 119.

DESCR. This forms a *shrub* of some feet in height; its *branches* rounded, pubescent. *Leaves* on long *petioles,* cordate, very acuminate, serrated for their whole length, with three principal and several lateral nerves, and reticulated with connecting veins, soft, with a copious down of stellated hairs when seen under a microscope. *Stipules* obsolete. *Peduncles* two to three inches long, from the axils of the upper *petioles,* and longer than they are, somewhat drooping. *Calyx* broad and truncated at the base,

---

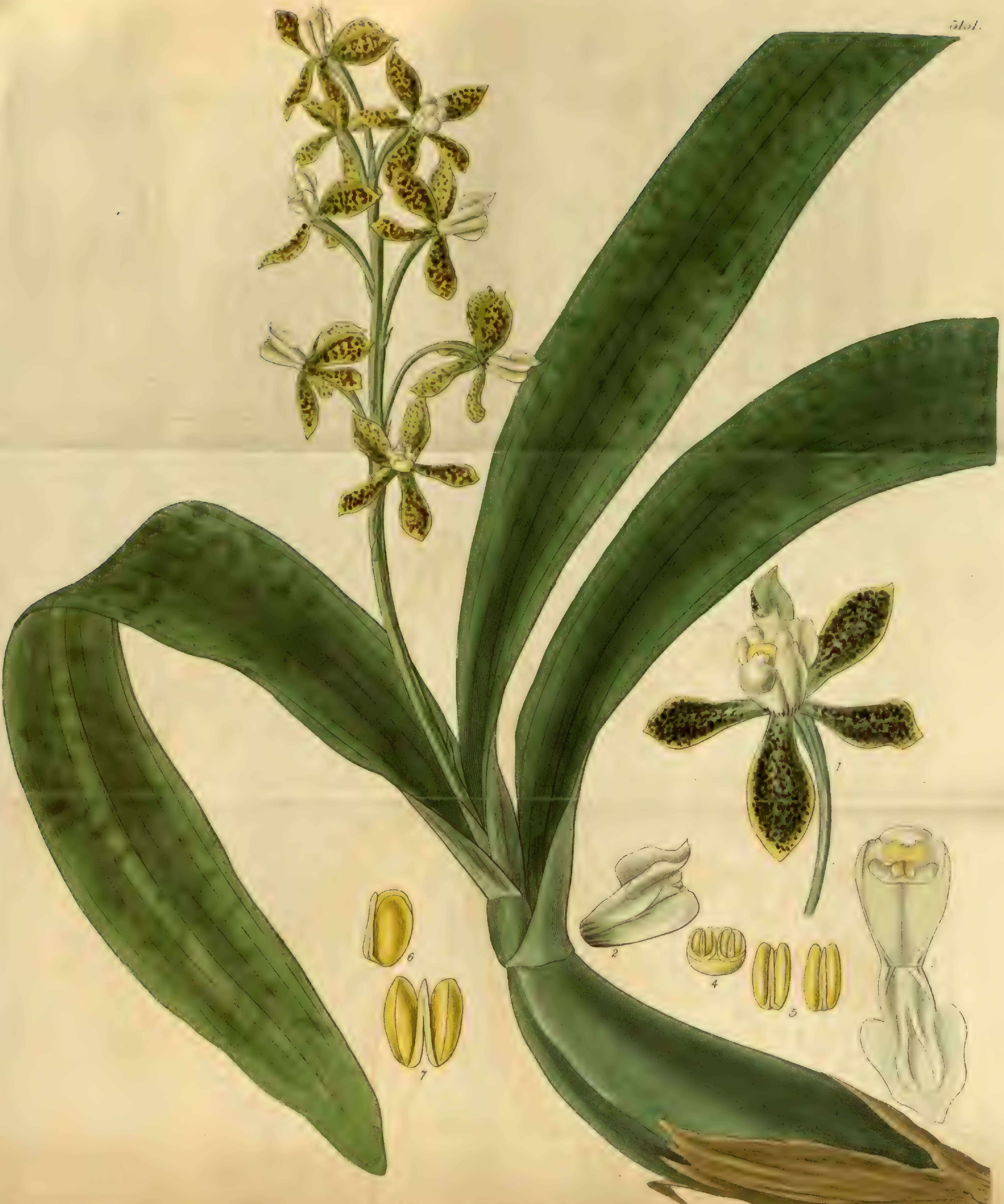
* Derivation at tab. 2857.

somewhat inflated, five-cleft, with acute segments. *Petals* rather large, showy, broadly obovate, nerved, reddish, somewhat inclining to purple, very concave and erect, so that taken collectively they almost form a globose corolla. *Stamens* numerous. *Anthers* yellow, very compact.

Of this plant, seeds were sent about the year 1820, by Sir THOMAS HARDY from South America, to Lady CAMPBELL; but from what part of that vast continent is not stated in the MS of Dr. SIMS, for whom the drawing was made at Messrs. WHITLEYS, Fulham, in October 1821. It appears, however, to be clearly the SIDA *rosea* of Messrs. LINK and OTTO in the work above quoted, differing only in the deeper colour of its flowers; and thence we learn that it is a native of Brazil, and that it was introduced to the Botanic Garden of Berlin, in 1817, by Prince MAXIMILIAN DE NEUWIED.

It is evidently allied to the SIDA *globiflora* of this work t. 2821, and is equally remarkable for the globose flowers and inflated calyx, truncate at the base.

5151.



Pub by S. Curtis Glazenwood Essex Mar 1 1859

EPIDENDRUM VARIEGATUM. VARIEGATED EPIDENDRUM.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Columna cum ungue labelli longitudinaliter connata in tubum (quandoque decurrentem ovarium). *Massæ Pollinis* 4, parallelæ, septis completis persistentibus distinctæ, basi filo granulato elastico auctæ. *Br.*

Specific Character.

EPIDENDRUM* *variegatum;* bulbo elongato compresso, foliis subternis ligulatis maculatis, perianthii foliolis obovato-oblongis acutis intus atro-purpureo-maculatis, columna brevi, labello cordato intus lineis duabus elevatis, flore recto.

DESCR. Parasitic. *Stem* bulbiform, branched: the *bulbs* oblong, compressed, smooth, dark green, sheathed at the base with the withered bases of former years' leaves, one bulb rising above another. Two or three *leaves* terminate this bulb: they are eight to ten inches long, ligulate, obtuse, striated, of a yellow-green, dashed with deeper spots, so that they have a variegated appearance. *Raceme* terminal, on a compressed *peduncle,* a span high, lax, of about eight to ten *flowers,* which are straight, not twisted. *Perianth* of six obovato-oblong, nearly equal *pieces,* of a yellowish-green colour, somewhat coriaceous, obtuse, yellower

---

* Derivation at tab. 2844.

towards the extremity; the upper or inner side sprinkled almost all over with blackish-purple spots: they are patent or even reflexed. *Column* short, standing out horizontally, thickened upwards, nearly plane, within pale yellow-green, united for nearly its whole length with the *lip*, whose free part is cordate, acute, within having two elevated longitudinal lines, which are slightly downy. *Anther-case* yellow, lodged in a depression at the top of the column, where there is a small three-toothed scale. *Pollen Masses* in two pairs, each pair having its *caudiculi* combined at the extremity. *Stigma* transverse, depressed, viscid. *Column* slender, subclavate, not at all twisted.

From the collection of RICHARD HARRISON, Esq. of Liverpool, who obligingly communicated a fine specimen of this interesting plant, with a drawing by his sister, Mrs. ARNOLD HARRISON, in January, 1832. The root was sent from Rio by Mr. WILLIAM HARRISON.

It is extremely unlike any other species of the Genus with which I am acquainted, and the flowers are very beautiful. The leaves, too, have a remarkable appearance, being spotted with a darker colour.

Fig. 1. Flower. 2. Side view of the Column and Lip. 3. Lip, with the Labellum forced down so as to show its form more distinctly. 4. Anther. 5, 6, 7. Different views of the Pollen-Masses: *magnified.*

3152.

Curtis delt

Pub by S. Curtis Glazenwood Essex May 1.1832.

HIBISCUS MANIHOT, β. PALMATED-LEAVED HIBISCUS, *var.* β.

****

Class and Order.

MONADELPHIA POLYANDRIA.

(Nat. Ord.—MALVACEÆ.)

Generic Character.

Calyx cinctus involucello sæpius polyphyllo, rarius foliolis paucis aut inter se coalitis. *Petala* hinc non auriculata. *Stigmata* 5. *Carpella* in capsulam 5-locularem coalita, valvis intus medio septiferis, loculis polyspermis aut rarius 1-spermis. *D C.*

Specific Character and Synonyms.

HIBISCUS *Manihot;* caule inermi, foliis subglabris palmato-partitis, lobis 5—7 acuminatis grosse serratis, involucello hispido 4—8-phyllo, pedicellis floridis declinatis. *D C.*

HIBISCUS Manihot. *Linn. Sp. Pl. p.* 980. *Cav. Diss.* 3. *p.* 172. *t.* 63. *f.* 2. *Willd. Sp. Pl. p.* 825. *Ait. Hort. Kew. ed.* 2. *v.* 4. *p.* 229. *Sims in Bot. Mag. t.* 1702. *De Cand. Prodr. v.* 1. *p.* 448. *Spreng. Syst. Veget. v.* 3. *p.* 102.

KETMIA folio Manihot serrato, flore amplo sulphureo. *Dill. Elth. p.* 189. *t.* 156. *f.* 189.

(β.) *palmatus;* foliis palmatifidis, radice crassa fungosa. *De Cand. Prodr. v.* 1. *p.* 448. (TAB. nostr.)

HIBISCUS palmatus. *Cav. Diss.* 3. *p.* 168. *t.* 63. *f.* 1.

A description, and an excellent figure of the *var.* α, the type of this species, having been given at t. 1702 of this work, we need offer no further remark than to say, that the present is distinguished by the greater size and beauty of the flowers, and the less deeply divided *leaves.*

The plant from which our figure was taken, blossomed in the stove of the Count DE VANDES at Bayswater, in November, 1821.

J. Curtis del.

Pub. by S. Curtis Glazenwood Essex May 1 1832.

Swan Sc.

(3153)

MYRCIA ACRIS. WILD CLOVE-TREE, OR Bay-Berry Myrtle.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—MYRTACEÆ.)

Generic Character.

Calycis tubus subglobosus, rarissime ovatus, *limbus* 5-partitus. *Pet.* 5. *Stam.* numerosa, libera. *Ovarium* 2—3-loculare, loculis pluriovulatis. *Bacca* sæpius matura 1—2 ?-locularis, 1—3 ?-sperma. *Semen* subglobosum testa lævi. *Cotyledones* foliaceæ, corrugato-contortuplicatæ.—Frutices *aut* arbusculæ *omnes ex insulis Caribæis aut America australi ortæ.* Folia *opposita integerrima pellucido-punctata aut opaca, nervatione* Myrti *donata.* Pedunculi *axillares et subterminales paniculati multiflori.* Flores *albi.* *D C.*

Specific Character and Synonyms.

MYRCIA* *acris;* pedunculis axillaribus et terminalibus trichotomis corymbosis folio longioribus compressis, floribus 5-fidis, foliis ellipticis obtusis convexis coriaceis glaberrimis superne venis elevatis reticulatis subtilissime pellucido-punctatis.

MYRCIA acris. *De Cand. Prodr. v.* 3. *p.* 243.

MYRTUS acris. *Sw. Fl. Ind. Occ. v.* 2. *p.* 909. *Willd. Sp. Pl. p.* 973. *Ait. Hort. Kew. ed.* 2. *p.* 190. *Spreng. Syst. Veget. v.* 2. *p.* 487.

MYRTUS caryophyllata. *Jacq. Obs.* 2. *p.* 1. *(non Linn.)*

CARYOPHYLLUS 1, foliis oblongo-ovatis oppositis, racemis lateralibus et terminalibus. *Browne, Jam. p.* 247.

CARYOPHYLLUS aromaticus Indiæ occidentalis foliis et fructu rotundis. *Pluk. Alm.* 88. *t.* 155. *f.* 3.

---

* This was fabled to be so named from MYRSINE, an Athenian damsel, and favorite of MINERVA, who was changed into a Myrtle.

Descr. A *tree*, according to Swartz, clothed with a grey, brown *bark*. *Branches* compressed, in our dry specimens, (but Swartz describes them as terete,) four-angled, often marked with very minute, raised points, glabrous. *Leaves* opposite, three to five inches long, very coriaceous, elliptical, obtuse, convex above, the margins revolute, waved and subtortuose, with many parallel, nearly horizontal nerves united by reticulations which are most apparent on the upperside, (where are impressed dots,) and, in the dry state, beneath pale, with discoloured, not depressed dots. *Panicles* pedunculate, axillary, the *peduncles* as long as, or longer than, the leaves, very compressed, ancipitate: *branches* brachiate, each subtended by opposite, small, deciduous *bracteas*. *Calyx*, including its adherent tube, obconical, punctate, of four short, spreading, obtuse lobes, which are downy within. *Petals* five, nearly orbicular, scarcely clawed. *Stamens* numerous. *Anthers* yellow. *Germen* small, adherent with the tube of the calyx, the summit only free, two-celled, with one broad *ovule* pendent from the top of each cell. *Style* longer than the stamens, plane: *Stigma* obtuse. The perfect *fruit* I have not seen.

Of this highly fragrant plant I am not aware that any good figure exists. It is, indeed, on account of its affinity with the Myrtus *Pimenta* of Linnæus, involved in some obscurity; having, I fear, been not unfrequently confounded with that grateful aromatic. In the absence of fruit, it is, perhaps, best distinguished by its five- (not four) lobed calyx, its more elliptical, and far more coriaceous leaves, which are glossy and reticulated (when dry) on the upper surface. The *seeds* are very different in the two plants, if De Candolle be correct, and hence they are by him referred to different Genera, Myrtus *Pimenta* to Eugenia, and the M. *acris* of Swartz to Myrcia. In the former, the radicle and the cotyledons are very thick and conferruminated: in Myrcia the cotyledons are coriaceous and corrugated and contortuplicate. From Myrtus they are both distinguished by the extremely thin and membranous coat to the seed. In Eugenia *Pimenta* the stigma is certainly capitate, as described by Mr. Lindley.

The Myrcia *acris* is a native of Jamaica, and, probably, of other West India Islands. I have numerous specimens from the Rev. L. Guilding from St. Vincent.

Lunan, the author of "Hortus Jamaicensis," thus speaks of this plant. "It may contend with most trees for the palm of elegance; it grows slowly, and attains a considerable size,

size. The trunk is handsome, straight, forming a very lofty, thick, and beautiful pyramid. In the younger trees, the bark is brown, then ash-coloured, and finally white, with yellow spots; very smooth and even, but sometimes hanging down in slender shreds, it has an astringent, somewhat aromatic flavor. The timber is very hard, red, and ponderous, capable of being polished and used for mill-cogs and other purposes where much friction is required. The young branches are sharply four-angled and green; their leaves three to four inches long, of a very sweet aromatic smell, and on account of their agreeable astringency, often used as sauce. The flowers are small, white, with a slightly reddish tinge; the berries round, as large as peas, having an aromatic smell and taste, which render them agreeable for culinary purposes; they contain seven or eight seeds."

The tree is a native of several of the West Indian Islands, and is called in Grenada, *Bois d'Inde*. BROWNE says, it is common in Antigua and Jamaica, as well as Barbadoes, and generally attains a considerable size; that it fills the woods with the fragrant smell of its leaves, nearly resembling that of Cinnamon, but its bark has none of the warmth of that of Cinnamon, though the berries much resemble Cloves, both in form and flavour. It is commonly called *Wild Cinnamon*, or *Wild Clove Tree;* and is said to be the *Bayberry* of HUGHES.

Fig. 1. Bud. 2. Section of the Germen.

[illegible]

Pub. by S. Curtis Glazenwood Essex Mar 1. 1832

MAXILLARIA PICTA. PAINTED MAXILLARIA.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. DIV. VANDEÆ, *Lindl.*)

Generic Character.

Perianthium patens, resupinatum. *Labellum* cum processu unguiformi columnæ articulatum, trilobum. *Foliola* lateralia *exteriora* basibus cum processu columnæ connata. *Pollinia* 4, basibus connata, glandulosa, (vel 2, pedicellata, pedicello basi glutinoso.)—Herbæ *parasiticæ, bulbosæ, Americæ meridionalis.* Racemi *(vel* scapi *uniflori) radicales. Lindl.*

Specific Name and Character.

MAXILLARIA *picta;* bulbis ovatis 1—2-phyllis, foliis lineari-lanceolatis, scapo radicali unifloro, petalis incurvo-patentibus lineari-oblongis subæqualibus discoloribus maculatis, 2 inferioribus basi subproductis, labello oblongo incurvo 3-lobo disco elevato pubescente, lobis lateralibus incurvis terminali subcordato acuto.

DESCR. *Bulbs* about as large as a pigeon's egg, dark green, clustered, obscurely furrowed, bearing one or two linear-lanceolate or strap-shaped, almost nerveless, coriaceous, acute *leaves,* a span, or nearly a foot long. *Scape* five to six inches high, arising from the root at the base of a bulb and there solitary, in part sheathed by membranous scales, single-flowered. *Flowers* large, handsome, inclined. *Petals* spreading, but singularly incurved, oblongo-linear, acute, nearly equal (the two inner ones being the smallest); all of them of a rich and deep orange-colour within, spotted with purple; externally almost white, with spots and blotches of deep purple. *Lip* oblong, pale, dirty-white or cream-coloured, but little spotted, three-lobed, the disk with an oblong, downy swelling, the two lateral lobes incurved, the terminal one somewhat recurved, cordate, acute. *Column* of a deep, almost black-purple, as well as the *anther*, which is hemispherical. *Pollen-masses* four, deep yellow, obovate, connected by the base with a short stalk, which spreads laterally into a transversely linear, incurved gland.

This is another of the many new Orchideous plants received by Mrs. ARNOLD HARRISON, from her brother in Brazil, where it was gathered in that spot, so fertile in vegetables of this family, the Organ Mountains. It flowered during the month of December in Mrs. HARRISON's stoves, and is eminently deserving a place in every collection from the size and beauty of its blossoms. The colour and markings are exceedingly beautiful.

Fig. 1. Column. 2. Lip. 3, 4. Back and front view of the Pollen-Masses :—*magnified.*

W. J. H. del.

Pub by S Curtis Glazenwood Essex. May 1. 1859.

Swan

BIDENS STRIATA. STRIATED-FLOWERED BUR-MARIGOLD.

****

Class and Order.

SYNGENESIA FRUSTRANEA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Anthodium simplex partitum subcoloratum involucratum. (*Flosculi* interdum radiales lingulati.) *Receptaculum* paleaceum. *Pappus* aristis subbinis retrorsum aculeatis. *Spreng.*

Specific Character and Synonym.

BIDENS* *striata;* caule subpubescente striato, foliis (plerisque) ternatis, foliolis ovato-acuminatis serratis, lateralibus subsessilibus terminali majori sublonge petiolato, radii flosculis late obovatis lineatis (albis).

BIDENS striata. *Sw. Br. Fl. Gard. t. 237.*

DESCR. Annual? *Stem* from a foot and a half to three or four feet high, erect, much branched, striated, slightly downy. *Leaves* petiolated, almost wholly ternately pinnated: the two lateral leaflets the smallest, nearly sessile, the terminal one on a rather long *petiole:* all of them ovate, acuminate, waved, and much nerved, glabrous. The lowermost leaves on the plant, which are of considerable size, and some of the extreme upper ones, which may be considered bracteas, are simple. *Flowers* in a sort of paniculated, leafy *corymb,* moderately large. *Involucre* of a double series of scales; the outer linear, reflexed, downy; the inner oblongo-linear, obtuse, glabrous, erect. *Receptacle*

---

* So named from the two teeth which crown the summit of the fruit.

tacle with numerous long, linear, chaffy scales. *Florets* of the *ray* five to six, large, white. *Corolla* broadly-obovate, marked with lines, three-toothed. *Corollas* of the *disk* numerous, yellow, tubular, five-toothed. *Anthers* black-purple. *Stigma* bifid, the segments linear, spreading, hairy. *Achenium* linear-oblong, compressed, margined, the edges scabrous, the short bristles pointing upwards. The *Pappus* consists of two erect, rigid bristles, retrorsely scabrous.

This is one of the many interesting plants introduced to our gardens by the late Mr. BARCLAY from Mexico. It is the more desirable from being quite hardy, if treated as an annual, although the root is, probably, perennial, and from blossoming late in the autumn. The flowers are abundant, and conspicuous from their large white rays.

Fig. 1. Involucre with the Scales of the Receptacle. 2. Floret of the Ray. 3. Floret of the Disk, with its accompanying Scale. 4. Achenium: *magnified.* 5. Leaf from near the root: *nat. size.*

3156.

Pub by S. Curtis Glazenwood Essex May 1 1832.

Swan sc

(3156)

DIURIS MACULATA. SPOTTED DIURIS.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium irregulare, subringens, 6-partitum: *foliola* 2 *anteriora exteriorum* labello ecalcarato trifido supposita, linearia: *interiorum* lateralia patula, unguiculata. *Anthera* stigmati parallela, utrinque lobo laterali columnæ petaloideo stipata. *Br.*

Specific Character and Synonyms.

DIURIS * *maculata;* labello basi intus bicarinato, laciniis lateralibus intermedium subæquantibus, foliolorum perianthii interiorum laminis obovatis. *Br.*

DIURIS maculata. *Sm. Ex. Bot. v.* 1. *p.* 57. *t.* 20. *Willd. Sp. Pl. v.* 4. *p.* 79. *Br. Prodr. v.* 1. *p.* 315. *Sieber, Fl. Nov. Holl. n.* 165.

DESCR. *Root?* *Stem* ten to twelve inches high, rounded, glabrous, leafy mostly at the base. *Leaves* linear-subulate, canaliculate, striated, gradually becoming smaller upwards, and soon passing into sheathing scales. *Raceme* of eight to ten *flowers,* each subtended by a membranous, sheathing *bractea.* *Petals* spreading; *upper one* of the *outer series* ovate, jagged, yellow, spotted, the two *lower ones* of the same series linear, green, deflexed, and often crossing each other. Two *inner petals* large, spreading, and directed upwards, obovate, tapering into a long claw, pale yellow spotted with rich purple-brown. *Lip* deep yellow, and spotted, three-lobed, the lateral lobes oblong, reflexed, jagged; the middle one much larger, obcuneate, with two prominent ridges near the base. *Column* flattened, short, with two ovate, jagged *wings*, which embrace the ovato-acuminate, two-celled *anther*. *Germen* linear-clavate, twisted.

---

* From δις, *double,* and οὐρα, *a tail,* in allusion to the form of two of the petals.

For the opportunity of figuring this interesting plant, I am indebted to the kindness of W. TOWNSEND AITON, Esq.; who sent me a drawing taken from a plant which had blossomed in the Royal Gardens of Kew, in March, 1825. It was transmitted from New South Wales, by Mr. ALLAN CUNNINGHAM, 1823. From the specimens in my Herbarium it would appear that this plant is liable to much variation in the size and colour of its flowers; which are, indeed, among the most elegant of the family: but the colour and the markings of the blossoms in the "Exotic Botany" figure, as Mr. BROWN observes, are far from being well executed.

Fig. 1. Lip, Column, and Anther. 2. Back view of the Lip. 3. Column, with its Wings and Anther. 4. Anther:—*magnified.*

3157

Rev. L. Guilding del.

Pub by S. Curtis Glazenwood Essex. May 1. 1832.

Swan Sc.

MIMUSOPS DISSECTA. CUT-FLOWERED MIMUSOPS.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—SAPOTÆ.)

Generic Character.

Cal. 8—6-partitus, gemino laciniarum ordine. *Corolla* laciniis duplici serie, *exteriores* 6—16, integræ vel divisæ: *interiores* 6—8, integræ. *Stamina antherifera* 6—8, laciniis interioribus opposita, totidem *sterilia* alternantia. *Ovarium* 6—8-loculare. *Bacca* abortione oligosperma, v. monosperma. *Semina* nucumentacea, albuminosa. *Br.*

Specific Character and Synonyms.

MIMUSOPS *dissecta;* foliis elliptico-ovatis obtusis retusisve subtus cinereo-argenteis, floribus octandris, corollis octo-decemfidis, pedunculis solitariis ex axillis supremis ramorum.

MIMUSOPS dissecta. *Br. Prodr. p.* 531. *Spreng. Syst. Veget. v.* 2. *p.* 208.

MIMUSOPS Kauki. *Linn. Sp. Pl. p.* 497? *Br. Prodr. v.* 1. *p.* 531?

MIMUSOPS hexandra? *Roxb. Corom. v.* 1. *t.* 15.

ACHRAS dissecta. *Forst. Pl. Esc. p.* 43. *Prodr. p.* 25. *Willd. Sp. Pl. v.* 2. *p.* 223.

ACHRAS Balata. *Aubl. Pl. Guian. v.* 1. *p.* 308.

MANIL-KARA. *Rheed. Hort. Mal. P. IV. p.* 53. *t.* 25.

METROSIDEROS Macassarensis. *Rumph. Amb. v.* 3. *p.* 19. *t.* 8.

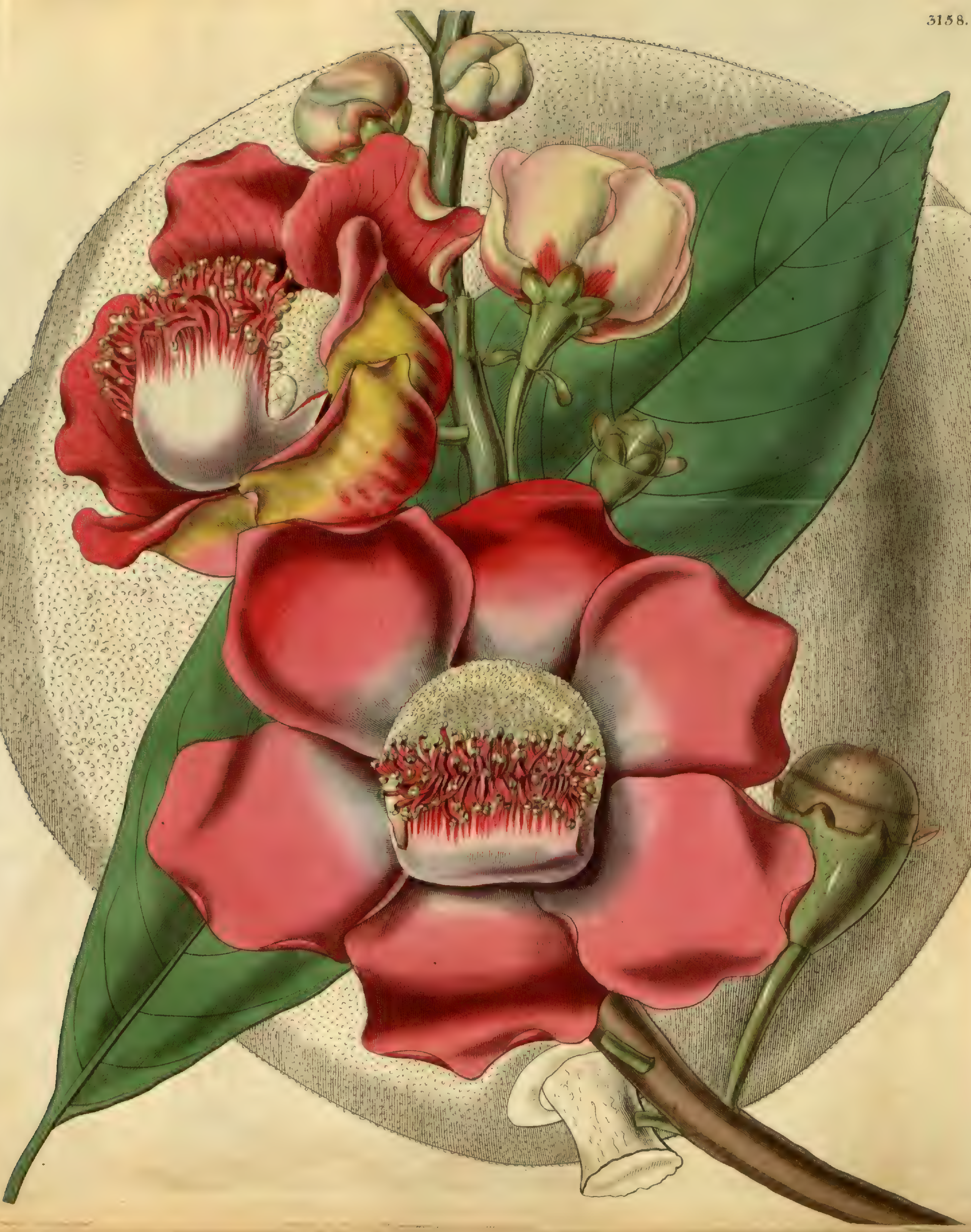
DESCR. A small tree? *Branches* numerous, rounded, the ultimate ones short and bearing leaves, and, in their axils, flowers also at the extremities. *Leaves* petiolated, elliptical-ovate, entire, coriaceous, obtuse or retuse, glabrous and somewhat shining, dark green above, beneath silvery-grey, penninerved, the nerves prominent beneath: *petiole* about an inch long. *Flowers* solitary on *peduncles,* about as long as the petioles, but appearing aggregated from the circumstance of their arising from the axils of the crowded leaves at the extremity of the branches. *Peduncles* curved, swollen upwards. *Calyx* of six ovate *leaves* arranged in two series, slightly downy, spreading. *Corolla* monopetalous, of eighteen *segments* arranged in a double series, the *outer* of twelve linear-acuminate laciniæ, the *inner* of six somewhat narrower ones, opposite the fertile stamens. *Stamens,* six fertile and six alternating barren, squamiform, denticulated ones. *Filaments* of the perfect stamens subulate: *Anthers* oblongo-acuminate, reversed. yellow. *Germen* small, conical, tapering into a slender, filiform *style.* *Stigma* obtuse. *Fruit,* a large oval, or nearly obovate, one-seeded (by abortion), at first green, at length brownish-purple *Berry,* with the traces of five other cells, and tipped with the persistent style. *Seed* somewhat triangular, compressed, with a narrow, linear scar or *hilum.*

Although cultivated under the name of ACHRAS *dissecta* of FORSTER in the island of St. Vincent, whence drawings and specimens have been kindly communicated by the Rev. L. GUILDING, I am by no means certain that this is the plant of that author: for its most important distinguishing character, the pale and almost silvery hue of the underside, is not mentioned by FORSTER. It would, perhaps, have been more correct, to have adopted the Specific Name of AUBLET; for he has most accurately described the foliage; and it is more than probable, that it was introduced, as many other plants were known to be, to St. Vincent from Guiana. AUBLET speaks of it as brought from the Isle of France, where it is called *Bois de Nattes.* But this is a vague term, and in Mauritius, according to my friend Professor BOJER, is applied to three different plants: "Bois de Nattes à petites feuilles, (MIMUSOPS *retusa*); Bois de Nattes à grandes feuilles (M. *Natta*); and Bois de Nattes à pomme de Singe." I have no reason to think it is any of these: and if it be really the ACHRAS *dissecta,* it is a native of the Philippine and Friendly Islands. The figures both of RHEEDE and RUMPHIUS above quoted, seem to be sufficiently characteristic of our plant, and the MIMUSOPS *hexandra* of ROXB. *Corom.* which Mr. BROWN notices, as scarcely to be distinguished from the ACHRAS *dissecta* of FORSTER, seems to differ only in the broader segments of the corolla, and the different colour of the underside of the leaves. Lastly, Mr. BROWN'S M. *Kauki* appears to differ in nothing but the greater length of the petioles.

The fruit of our plant is esculent, and Mr. GUILDING remarks, that the cultivation of it is too much neglected in our colonies.

From the ACHRAS *dissecta* an unctuous fluid is said to exude. The fruit is of an agreeable acid, and on account of it, the plant is extensively cultivated in China, Manilla, and Malabar. The leaves pounded and mixed with the roots of *Curcuma* and with *Ginger* are used as cataplasms for tumors.

Fig. 1. Extremity of a Flowering Branch, from which many of the Leaves are removed. 2. Branch with Fruit: ***nat. size.*** **3. Corolla laid open. 4. Stamen. 5. Seed.** ***nat. size.***



COUROUPITA GUIANENSIS. GUIANA COUROUPITA, OR Cannon-Ball Tree.

****

Class and Order.

POLYANDRIA MONOGYNIA.

(Nat. Ord.—MYRTACEÆ. Trib. LECYTHIDEÆ.)

Generic Character.

Calycis tubus turbinatus, *limbus* 6-lobus persistens. *Petala* 6 inæqualia. *Ligula staminea* antheris basi et apice instructa. *Ovarium* turbinatum, 6-loculare. *Septa* parietalia versus axim reflexa ibique columellam mentientia; funiculi inter se concreti et ideo ovula plurima gerentes. *Stylus* 0. *Stigma* stellatum hexagonum. *Capsula* crustacea, globosa, circulo calycino cincta, operculo non solubili notata, evalvis, intus pulposa. *Mesocarpium* ante maturitatem carnosum, postea deliquescentia evanidum, tuncque endocarpium ab epicarpio solutum et volubile. *Semina* in pulpa nidulantia, plurima, ovata, membrana villosa coriacea tecta. *Embryo* subrotundus compressus rostratus. *Cotyledones* magnæ foliaceæ nervosæ plicatæ corrugatæ sub radicula claviformi curvatæ.—Arbores. Folia *petiolata oblongo-cuneata subcrenulata.* Stipulæ *parvæ caducæ.* Racemi *simplices trunco ramisque innascentes, bracteati.* Flores *ampli sordide albescentes aut incarnati. D C.*

Specific Character and Synonyms.

COUROUPITA * *Guianensis ;* foliis acutis, (calycis margine circumscisso petalis acutis) ? *D C.*

COUROUPITA Guianensis. *Aubl. Guian. v.* 2. *p.* 708. *t.* 282. *Descourt. Fl. Med. des Antil. v.* 5. *p.* 137. *f.* 340. *Poit. in Mem. du Mus. v.* 13. *p.* 152. *De Cand. Prodr. v.* 3. *p.* 294.

LECYTHIS bracteata. *Willd. Sp. Pl. v.* 2. *p.* 1174.

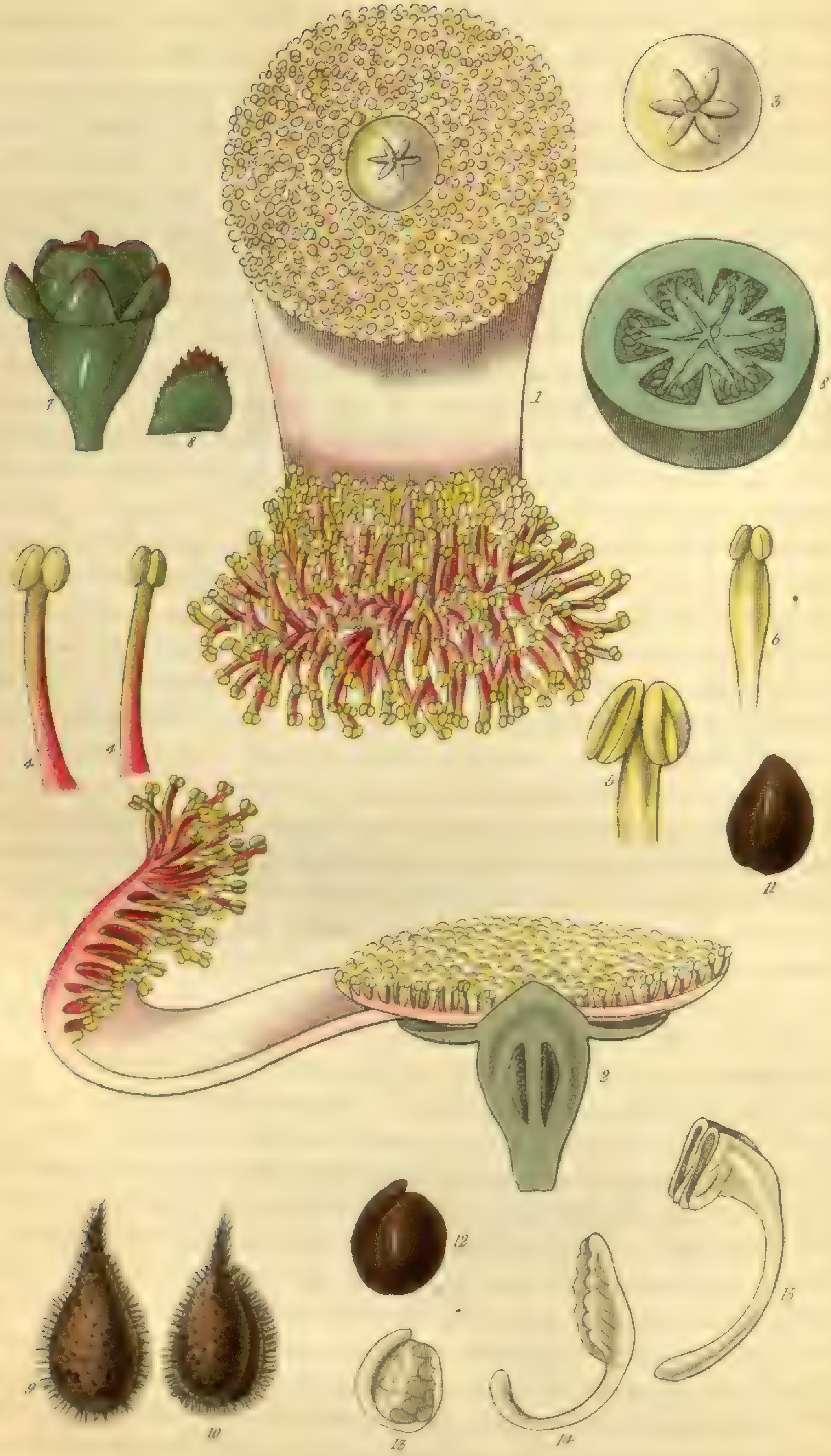
PEKEA Couroupita. *Juss.*

---

* The name of the plant in Guiana.

Descr. A *Tree* of large size, from fifty to sixty feet high, with a *trunk* often more than two feet in diameter: the *wood* is soft; the *branches* spreading, covered with a smooth bark. *Leaves* most copious at the extremities of the branches, eight to ten inches long, broadly lanceolate approaching to cuneate, shortly acuminate, membranaceous, very obscurely toothed; veins oblique, reticulated with nerves. *Petioles* about an inch long, downy. *Racemes* one to three feet in length, produced on the former year's branches, and upon different parts of the trunk, bearing a great many, sometimes a hundred flowers; of a very large size, and no less splendid in colour. The *buds* shortly before expansion are about the size of a medlar; they open slowly, two or three in a morning, and falling off in the evening, and are highly fragrant. At the base of the flower are two opposite, oblong, deciduous *bracteas*. The *calyx-tube* is turbinate, adherent with the germen or ovary, its *limb* of six rounded, minutely ciliated lobes. *Corolla* of six (rarely seven) coriaceous, unequal, imbricated, suborbicular, but much waved and concave *petals*, yellowish on the outside with a tinge of red, crimson-lilac within, spreading horizontally. In the centre of this corolla, and around the upper part of the pistil, is a remarkable staminiferous *ligule* or *nectary*: it is a large, fleshy, exactly circular disk, densely covered with short, upright, fleshy, yellowish *stamens*, one side of which is prolonged into a broad, strap-shaped, fleshy ligule, folded or doubled upon itself, the extremity of which on the upper side is thickly clothed with numerous longer, red, fleshy *stamens*. These *stamens* seem to be the most perfect. The *filaments* are cylindrical. The *anthers* subglobose, two-celled. Those of the circular disk, besides being smaller and of a different colour, have the filaments clavate; those of the centre appear to be abortive. The greater portion of the *pistil* is inferior, the upper or free portion, which may, perhaps, be considered the *style*, is broad and hemisphærical: the *stigma* of six, appressed rays. The *Germen* appears to have six *cells*: but if examined carefully, it will be found that there are six, arrow-shaped (viewed when cut transversely) receptacles, arising from parietes and meeting in the centre, and that each of the barbs (if I may so term them,) bears several ovules, especially on its inner edge. When the germen is a little swollen, and the petals with the staminiferous ligule have fallen away, there will be seen a transverse constriction in the free portion of the pistil, between the insertion of the limb of the calyx and the

3159.



1
3
7
8
2
4
4
6
5
11
2
12
15
9
10
13
14

Pub by S Curtis Glazenwood Essex June 1 1832. Swan Sc the apex of the pistil. Not having had the advantage of seeing the fruit in a recent state, I shall describe it in the words of M. Poiteau. "Although a *raceme* is composed of fifty to one hundred flowers, it produces but one or two round fruits, four to eight inches in diameter, reddish, rough to the touch, and marked by a circle, bearing the calyx at two-thirds of its height. In describing the bark of this fruit, I must employ the nomenclature of Richard; its epicarp is crustaceous, thin but solid; its sarcocarp is very thick and fleshy, the endocarp woody, a line thick, and very solid; the sarcocarp becomes deliquescent, and leaves a considerable space between the epicarp and endocarp, thus allowing the latter to roll about freely in the former. The endocarp is full of pulp, at first greenish-white, and becoming blue on exposure to the air. When the fruit is cut and ripe it has the colour of wine-lees, and diffuses a most intolerable odour. The six cells, which are evident in the green state, disappear at maturity, and the seeds are found here and there, of indeterminate number, scattered in the pulp: they are oval, roundish, compressed, covered with a woolly coriaceous membrane, and furnished with a long and equally woolly podosperm; the membrane in question cleaves laterally, and allows the escape of the kernel, covered with its own very thin coat. The embryo is roundish, compressed, with a very large, claviform radicle, and two large, foliaceous cotyledons, full of nerves, plaited, depressed, and applied to the radicle; the colour of the embryo is white, except the nerves of the cotyledons, which are rose-coloured."

M. Poiteau, when speaking of the groupe (his *Order*) of Lecythideæ in the "Mém. du Mus.," characterizes the plants which compose it as "*Trees* or *Shrub*s of the Equatorial regions, which have leaves simple and alternate, and the flowers racemose, remarkable for their size, their beauty, and the singularity of their structure; but of which no individual has blossomed in France, nor perhaps in Europe." If we consider the vast size to which the subject of the present description arrives, we despair of ever seeing it flourish in any extra-tropical region, and we cannot but feel greatly indebted to the Rev. L. Guilding, who has enabled us to give a figure with many details of this plant, than which none more curious or interesting has graced our pages. It is an inhabitant and one of the greatest ornaments of the dense forests of Cayenne, flowering at all seasons of the year, where it is not unfrequently concealed from view by a mass of the *Spanish Long-beard* (Tillandsia *usneoides*). Thence it has been introduced, I believe by Dr. Anderson, into the island of St. Vincent. If the tree is rendered attractive by the beauty of its flowers, which, moreover, are endowed with the most delicious odour, it is no less remarkable for the size of the fruit, whence, in conjunction with its form, the plant is called by the colonists the *Cannon-ball Tree.* "The fallen pericarps," says Mr. Guilding, "which strew the ground and exhibit the scar or hole by which they were attached to the peduncle, so nearly resemble the cannon-shell, that one might easily, at first sight, imagine that a company of artillery had bivouacked in its shade." If we may believe in the poetical language of M. Descourtilz, "Flore Pittoresque et Médicale des Antilles," the noise they make in falling affords an additional reason for the name: "sous un ciel pur et éblouissant, la grâce est toujours unie à la magnificence dans les scènes de la nature; partout, dans les mornes, des sources cachées dans la profonde nuit de la terre annoncent leur présence par un doux murmure, ou des eaux argentées qu'elles laissent filtrer entre les rochers, ou se dérober en gazouillant sous les gazons, ou les plantes qu'elles reverdissent. Lorsque le silence de la nature est interrompu par les brises violentes qui, sous la zône torride, font souvent le désespoir du cultivateur, ou entend la crépitation des fruits du Couroupite, dont le balancement produit un choc mille fois repeté, et semblable au feu roulant de la mousqueterie."

The Shell is used in South America for domestic purposes, as the Calabash. The pulp contains sugar, gum, malic, citric, and tartaric acids, and is employed to afford a refreshing drink in fevers; but, in the perfectly ripe state, Mr. Guilding says, "it exceeds whatever is filthy, stinking, and abominable in nature: yet the scent is remarkably vinous, and so durable, that on examining some portions of the fruit that had been preserved in rum for two or three years, the native odour of the plant was so strong, as to render the apartment almost insupportable. Insects revel in this disgusting and putrid pulp. Coleoptera and Forficulæ feed upon it, while the Formicæ find a shelter in the hollow of the shells."

Tab. 3158. Portion of a Raceme of Flowers with a Leaf and Fruit: *nat. size.*

Tab. 3159. Fig. 1. Ligule of Stamens spread open. 2. Section of the same and of the Pistil and Calyx. 3. Stigma and summit of the Pistil. 4. 4. Stamens from the Apex of the Ligule. 5. Anther. 6. Stamen from the Circle surrounding the Pistil. 7. Pistil a little advanced, with the Calyx. 8. Lobe of the Calyx. 8. * Transverse Section of ditto. 9. Seed with its outer Covering, and 10, the Covering bursting open (from Poiteau). 11. Seed. 12. Seed, with 13, Embryo; 14, Embryo unrolled; and 15, Embryo with the Lobes cut through to show their structure (from Poiteau.) Fig. 1. 7. 9.—13. *nat. size;* the rest more or less *magnified.*

3160.

W. J. H. delt

Pub by S. Curtis Glazenwood Essex June 1 1832.

[illegible]

BÆCKEA SAXICOLA. STONY BÆCKEA.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—MYRTACEÆ.)

Generic Character.

Calycis tubus turbinatus, *limbus* 5-fidus persistens. *Petala* 5. *Stam.* 5—10 (—15) libera, petalis breviora. *Stylus* filiformis. *Stigma* capitatum. *Capsula* 2—5-locularis, calyce inclusa, polysperma.—Frutices. Folia *opposita glabra, punctata.* Flores *pedicellati, albi, parvi.*

Specific Character and Synonym.

BÆCKEA * *saxicola;* glaberrima, foliis quadrifariis imbricatis obovatis acutis punctatis immarginatis brevissime petiolatis, floribus ex axillis foliorum supremorum solitariis vel binis breve pedunculatis, staminibus 10.
BÆCKEA saxicola. *Cunningham MSS.*

DESCR. A low *Shrub*, prostrate in its wild state, but, when cultivated in the gardens of Kew, erect, with virgate branches; the *branches* mostly opposite, quadrangular, clothed with pale grey, lax *bark.* *Leaves* most copious on the young shoots, all of them opposite, quadrifarious, obovate, coriaceous, acute, very shortly petioled, scarcely at all margined, dotted on both sides with glands, abounding in fragrant oil, erecto-patent. *Flowers* solitary, or two together, from the axils of the leaves, which are at the extremities of the branches, on petioles rather longer than the leaves. *Calyx* with its adherent *tube* turbinate, glandular; the *limb* of five rounded, delicate, pale-rose-coloured, almost

---

* In compliment to ABRAHAM BAECK, a Swedish Botanist.

white lobes. *Petals* very pale rose-coloured, orbicular, small. *Stamens* ten, five opposite to, and five alternating with the petals. *Filaments* short, erect, white. *Anthers* deep purple, roundish or cordate, apparently imperfect, and the germen never seems to be fertilized by them. The inferior *germen* presents a flat, dotted summit, constituting the disk of the flower, and bearing a short *style* with a slightly capitate *stigma* in the centre.

Received from the Royal Gardens at Kew, by favour of Mr. AITON, and where it was introduced by Mr. ALLAN CUNNINGHAM, who informs me that it is a native of bare, granite rocks on the South-west coast of Australia, where he detected it in 1822, flowering in the month of February. There its habit was quite prostrate; but, on cultivation, Mr. CUNNINGHAM finds its character to be much altered, and that it becomes an erect shrub.

It requires the shelter of a greenhouse, and the usual treatment of New Holland plants in general. At Kew it flowers in March.

Fig. 1. Bud. 2, 3. Flowers. 4. Stamen. 5. Portion of the Stem with Leaves.—*Magnified.*

3161.

W.J.H. delt

Pub. by S. Curtis Glazenwood Essex June 1. 1832.

[illegible]

(3161)

PITTOSPORUM CORNIFOLIUM. CORNEL-LEAVED PITTOSPORUM.

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—PITTOSPOREÆ.)

Generic Character.

Cal. 5-sepalus. *Pet.* 5, unguibus in tubum conniventibus. *Caps.* 2—3-valvis, medio septiferis. *Semina* pulpa resinosa obducta.—Frutices *foliis integris persistentibus.*

Specific Character and Synonym.

PITTOSPORUM * *cornifolium;* caule fruticoso gracili, foliis oppositis elliptico-lanceolatis glabris summis verticillatis, pedunculis terminalibus aggregatis villosis unifloris. *Cunn. MSS.*

PITTOSPORUM cornifolium. *Cunningham MSS.*

DESCR. A *shrub,* with forked *branches,* the upper ones trichotomous or subverticillate, clothed with reddish-brown, smooth *bark. Leaves:* the *lower* ones opposite, the *upper* verticillate, all of them elliptico-lanceolate, coriaceous, obtuse, two to three inches long, quite entire and glabrous, the veins reticulated, dark-green above, paler beneath. *Peduncles* in clusters of from two to five or six, arising from the terminal whorls of young leaves, an inch or an inch and a half long, very slender, hairy with spreading, minute hairs, single-flowered. *Flowers* rather small. *Calyx* of five patent, deciduous, subulato-lanceolate, green, ciliated leaves. *Corolla* of eight deciduous *petals,* of a reddish-brown colour, linear, the lower half erect, forming a *tube,* the rest strongly reflected, sometimes revolute, acuminated. *Stamens* five, hypogynous. *Filaments* as long as the tube of the petals, subulate, white, erect. *Anthers* yellow, oblongo-ovate. *Pistil: Germen* oval, obtuse, densely hairy. *Style* as long as the filaments of the stamens. *Stigma* capitate, green.

---

* From "*πιττοω, to besmear with pitch,* and *σπορα, seed;* because the seeds are enveloped in a pitchy fluid, exuding internally from the capsule as it ripens."

Obligingly forwarded from the Royal Gardens of Kew, where it was introduced some years ago by ALLAN CUNNINGHAM, Esq., who has most kindly communicated to me his notes, made on the place of growth in the year 1826, when he met with it in dark, humid woods by the rivers in New Zealand, producing flowers in September, and ripe fruit about the close of the year. It was uniformly found growing (parasitically) on tufts of ASTELIÆ (A. *Banksii*), and upon the trunks and principal branches of the larger timber-trees, particularly upon the "KACKATEA," or DACRYDIUM *taxifolium* of LAMBERT.

It flowers in the greenhouse of the Royal Gardens at Kew, in March.

Fig. 1. Bud. 2. Flower. 3. Stamen. 4. Pistil:—*magnified.*

3162.

[illegible] del.

Pub. by S. Curtis Glazenwood Essex June 1 1832.

LEUCOPOGON LANCEOLATUS. LANCEOLATE LEUCOPOGON.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Cal. bibracteatus. *Corolla* infundibuliformis, limbo patenti longitudinaliter barbato. *Filamenta* inclusa. *Ovarium* 3—5-loculare. *Drupa* baccata v. exsucca, nunc crustacea.

Frutices *sæpe humiles*. Folia *sparsa quandoque interrupto-conferta*. Flores *spicati, axillares vel terminales.* Discus hypogynus *cyathiformis sublobatus raro nullus. Br.*

Specific Character and Synonyms.

LEUCOPOGON* *lanceolatus;* spicis nutantibus aggregatis, ovariis 2-locularibus, drupis ovalibus, foliis lanceolatis planis 3-nervibus, ramulis glabris.

LEUCOPOGON lanceolatus. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 541. *(excl. Syn. Andr. and Vent.) Roem. et Sch. Syst. Veget. v.* 4. *p.* 474. *(excl. most of the Syn.) Cunningham in Field's N. S. Wales, p.* 341. *Sw. Br. Fl. Gard. t.* 47.

STYPHELIA lanceolata. *" Sm. Nov. Holl.* 49. *(excl. Syn.")* *Spreng. Syst. Veget. v.* 1. *p.* 657.

DESCR. An erect, much branched, large *shrub,* with graceful, more or less curved *branches,* clothed with reddish-brown *bark,* entirely glabrous. *Leaves* alternate, most

---

* λευκος, *white,* and πωγων, *a beard;* from the white, bearded limb of the corolla.

numerous upon the younger branches, where they are sometimes fascicled at the extremity, lanceolate, rigid, glaucous-green, slightly grooved, three-nerved. *Spikes* an inch or an inch and a half long, in clusters at the extremity of the branches, slender, drooping, bearing about eight to ten flowers. *Calyx* of five unequal, green, imbricated *leaves*, and two or three scales or *bracteæ* at the base. *Corolla* white, infundibuliform. The *tube* is a little swollen, the *limb* patent, at length reflexed, clothed above with white hairs. *Filaments* extremely short. *Anthers* oblong, one-celled, with a small, callous point or crest at the upper extremity. *Pistil:* Germen ovate, surrounded at the base by a short, five-lobed annulus: *Style* thick: *Stigma* subcapitate.

Introduced many years ago into the English Gardens, where it makes a graceful greenhouse shrub. It has been obligingly communicated by Mr. AITON from Kew Gardens, along with the following species, L. *Gnidium*, and was accompanied by some excellent remarks from Mr. ALLAN CUNNINGHAM with the view of showing that the two plants are really distinct, although they have been united by the generality of Botanists.

Mr. CUNNINGHAM speaks of L. *lanceolatus* as a frequent plant in the colony, and constituting a large shrub in the Blue Mountains. With us it bears its slender and drooping spikes of white flowers in March.

Fig. 1. Flower. 2. Stamen. 3. Pistil and hypogynous Gland :—*magnified.*

3163

[illegible] Pub by S Curtis Glazenwood Essex June 1 [illegible]

(3163)

HYMENANTHERA DENTATA. TOOTH-LEAVED HYMENANTHERA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—VIOLARIEÆ. Trib.—ALSODINEÆ. *Br.*)

Generic Character.

Calycis sepala 5 imbricata. *Petala* 5 alterna, ovato-acuminata, demum reflexa, calyce longiora, æstivatione obliqua imbricativa. *(Br.)* *Stamina* structura ad *Violam* accedentia, sed basi coalita in discum monadelphum; squamis totidem iis dorso oppositis. *Stylus* brevissimus. *Stigmata* 2 acuta. *Capsula* subbaccata (in sicco rugosa aut venoso-reticulata) tenuis ovata (unilocularis monosperma ?) 2-locularis, loculis 1-spermis, (sec. *Br.*) calyce petalis staminibusque induviata. *Semina* capsulæ conformia illamque omnino replentia, ad ejus apicem e placenta nerviformi (ut in Viola) pendula.—Seminis structura inter Violaceas et Polygaleas, ex *Br.*, media.

Frutices *ramosi.* Folia *nunc solitaria et alterna, nunc subfasciculata coriacea.* Flores *axillares parvi.* Pedunculi *solitarii (vel aggregati) uniflori, basi bibracteati. De Cand.*

Specific Name and Synonyms.

HYMENANTHERA * *dentata;* foliis oblongis denticulatis. *Br.*

HYMENANTHERA dentata. *Br. in De Cand. Prod. v.* 1. *p.* 315. *Spreng. Syst. Veget. v.* 1. *p.* 805.

DESCR. An erect, rigid *Shrub,* with pale, ash-coloured, roughish *bark,* and many erecto-patent, spinescent *branches*

---

* From υμην, *a membrane,* and ανθηρα, *the anther,* in allusion to the union of the Anthers by a membrane.

which themselves are armed with numerous subulate *spines*, about an inch long, sometimes naked, sometimes bearing a few *leaves*, at other times only the rudiments of leaves. The *leaves* are from half an inch to an inch long, alternate or fasciculated, generally remote, oblongo-lanceolate, nearly sessile, toothed, yellow-green, somewhat rigid. *Flowers* from the axils of the leaves, or from the older wood of the branches when the leaves have fallen away, solitary, or in clusters of two to four. *Pedicels* short, decurved, with two small *bracteas* at or near the base. *Calyx* of five broadly-ovate, imbricated, somewhat unequal leaves, combined at the base. *Petals* five, linear-lanceolate, rather unequal in size, twisted and imbricated in the acuminated bud, at length reflexed and revolute, not unlike those of a PITTOSPORUM, yellow. *Anthers* five, combined into an urceolate, swollen, membranaceous, orange-coloured *tube*, free only at the acuminated extremity, where each of the linear segments has its sides involute, its extremity toothed. *Cells* of the *anthers* double, oblong, yellowish. At the back of each anther is an erect, cuneate, yellowish scale. *Pistil* very small. *Germen* ovate, tapering into a short *style*, with a bifid, acute *stigma*.

Few persons, on first looking at this thorny, rigid, inelegant shrub, would suspect it to be allied to the same tribe with those universal favourites, the Violets: but an examination of the flowers will show that Mr. BROWN has done rightly in referring this his own Genus to that, or near to that, family, between it and the POLYGALEÆ as he thinks. The anthers, more or less combined in all the *Violets*, are here still more remarkably so, to that degree that they form an urceolate and inflated membrane, not unlike the covering to the fruit of a *Carex*. This highly curious plant has been introduced to the Royal Garden of Kew by the indefatigable Mr. ALLAN CUNNINGHAM, and a fine flowering specimen was obligingly sent to me by Mr. AITON, in March, 1832. "It grows," Mr. CUNNINGHAM observes, "in shaded situations in the Ikawarra district on the sea-coast to the Southward of Port Jackson and elsewhere in the colony, where, however, it is a rare plant. Sir JOSEPH BANKS appears to have found it near Port Jackson."

Fig. 1. A Flower and Bud. 2. Petal. 3. Stamens and Scales. 4. Single Scale. 5. Pistil. 6. Staminal Tube laid open: *magnified*.

3164.

W. J. del.

Pub by S. Curtis Glazenwood Essex June 1 1832

HABENARIA CORDATA. HEART-LEAVED HABENARIA.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Corolla ringens. *Labellum* basi subtus calcaratum. *Glandulæ pollinis* nudæ distinctæ (loculis pedicellorum adnatis vel solutis distinctis). *Br.*

Specific Character and Synonyms.

HABENARIA *cordata;* caule diphyllo, foliis cordatis subcarnosis nitidis quinquenerviis (siccitate reticulatis), petalis conniventibus, labello trilobo recurvo, cornu brevissimo, antheris duabus abortivis clavatis.

HABENARIA cordata. *Br.—Spreng. Syst. Veget. v.* 3. *p.* 691. *Hook. in Bot. Misc. v.* 1. *p.* 270. *t.* 55.

ORCHIS cordata. *Willd. Sp. Pl. v.* 4. *p.* 28.

SATYRIUM diphyllum. "*Link, in Schrad. Diar. Bot.* 1799, *p.* 323."

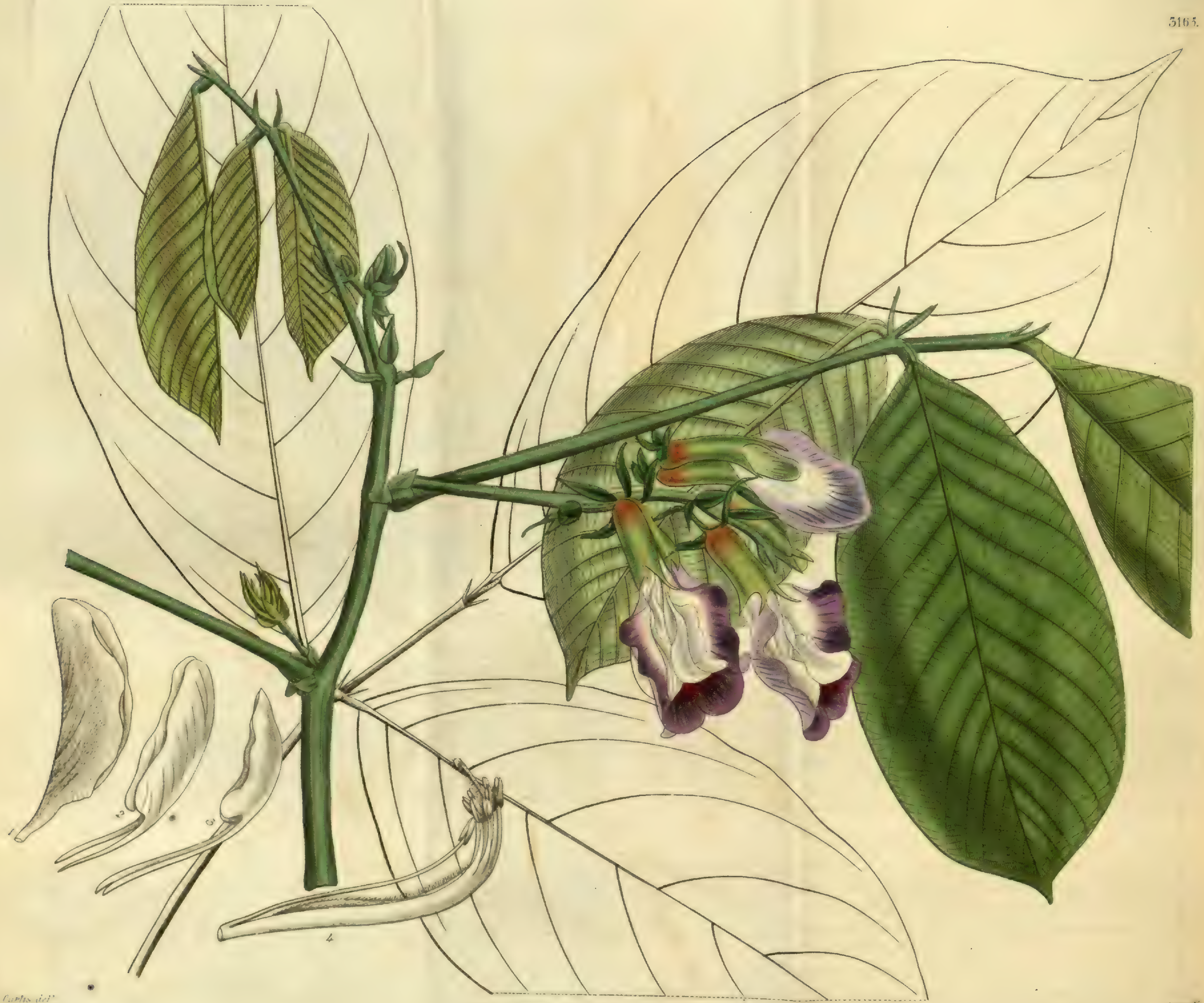
DESCR. *Root* consisting of a few stout, simple fibres, and, apparently, constantly, one solitary bulb. *Stem* a span or more high, erect, rounded, glabrous, bearing two remote, cordate, somewhat succulent, recurved, five-nerved, glossy *leaves,* of which the upper one is the smallest and narrowest, both having sheathing bases. *Spike* of many somewhat compact, rather small, greenish *flowers,* each with a *bractea* about its own length. *Petals* nearly equal in length, lanceolate, connivent, the three outer ones green, occupying the upper side of the flower, leaving the *labellum* exposed, and combined in their lower half. Two inner *petals* yellow-green, a little longer than the outer. *Labellum* longer than the petals, recurved, yellow-green, the sides incurved, three-lobed, the lobes ovato-lanceolate; at the base having a short, deflexed horn. *Column* extremely short, scarcely any. *Anthers* broadly oval, with two membranous cells, their bases spreading, through which the red-brown glands of the clavate, granular *pollen-masses* are protruded. On each side of the perfect anthers is a white, fleshy, clavate, abortive one, as long as the *anther* itself.

Few species of HABENARIA are, perhaps, less known than the present: it having been, so far as I am aware, only described, and as a native of Portugal, by Professor LINK; till the Rev. Mr. LOWE, who found it on walls at "Arco de Santo Gorge," and on rocks at "Entranza," on the Southern shores of the island of Madeira, enabled me to give a figure of it in the Botanical Miscellany. But that figure, like too many others done from dried specimens, is inaccurate in several particulars: and in none more so than in the reticulation of the leaves (which only appears after the specimen is dried,) and in the shape of the labellum. These errors I have now the pleasure of being able to correct from living plants, kindly sent by Mr. LOWE to the Botanic Garden of Glasgow. These flowered feebly in 1831, and again in March, 1832, when our drawing was made. The flowers are highly fragrant, especially in the evening.

The plants have been hitherto kept in a pot of peat and loam in an airy part of the greenhouse.

Fig. 1. Flower and Bractea. 2. Back view of the Anther, with the accompanying abortive Anthers. 3. Front view of the same. 4. Labellum, front view:—*magnified.*

3165.



Curtis del.

Pub. by S. Curtis Glazenwood Essex July 1.1832.

Swan sc.

CLITORIA? ARBORESCENS. WOODY CLITORIA.

* * *

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. basi bracteis 2 majusculis instructus, 5-fidus. *Cor.* vexillum amplum. *Stam.* diadelpha, cum petalis non imo calyci sed supra basin inserta. *Stylus* apice subdilatatus. *Legumen* lineare compressum rectum bivalve styli basi acuminatum 1-loculare, polyspermum. *Semina* isthmis cellulosis sæpe intercepta.—Herbæ *scandentes.* Folia *pinnata cum impari sæpius* 1-*juga, rarius* 2—3-*juga, foliolis sæpius stipellatis.* Flores *axillares, pedicellati, ampli albi, cærulei aut purpurei, sæpe resupinati. D C.*

Specific Character and Synonyms.

CLITORIA ? *arborescens;* caule scandente lignoso, foliolis 3 amplis ellipticis brevi-acuminatis subtus elevatim venosis junioribus ferrugineo-pubescentibus, pedunculis multifloris, floribus maximis, calycibus tubulosis, vexillo sericeo, pistillo pubescenti-tomentoso.

CLITORIA arborescens. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 302. *De Cand. Prodr. v.* 2. *p.* 235.

DESCR. *Stem* apparently climbing to a great height, and very woody, the young shoots only soft and herbaceous, rounded, glabrous. *Leaves* large, on long, rounded petioles, which have two persistent *stipules* at their base, ternate: *leaflets* elliptical, or somewhat obovate, shortly acuminate, subcoriaceous, nearly glabrous, the young ones *only* clothed with soft, ferruginous down, many nerved, the *nerves* oblique, parallel, prominent beneath, and connected with transverse veins: the lateral ones on very short, the intermediate ones on long *petiolules,* each with subulate *stipellæ* at their base. *Peduncle* axillary, two to three inches long. *Pedicels* very short, bracteated. *Flowers* large, purple and white, resupinate. *Calyx* three-fourths of an inch long, tubular, five-toothed, tinged with red, having two lanceolate bracteas at the base: *teeth* subulate, the lower one the longest. *Vexillum* ample, its back covered with beautiful, silky, down. *Alæ* or *carina* oblong; the latter acute. *Stamens* ten, nine united and one free: *Anthers* linear. *Germen* linear, hairy as well as the style: *Stigma* dilated or almost capitate.

This very handsome species of CLITORIA (?) was introduced to Mr. VERE'S Garden from Trinidad in the year 1804; and I possess excellent specimens from the same island, sent to me by Mr. LOCKHART. It is likewise cultivated as an ornamental plant in St. Vincent; and the beautiful drawing here given of the flowering specimen was made by Mr. JOHN CURTIS in 1822, during the time that Dr. SIMS conducted the Magazine. The larger leaf and the dissections I have represented from dried specimens, not having had the opportunity of seeing the recent plant myself. It necessarily requires the heat of a stove, and much room, to enable it to arrive at perfection.

Fig. 1. Vexillum. 2. Alæ. 3. Carina. 4. Stamens and Pistil; *scarcely magnified.*

(3166)

Coccoloba pubescens. Downy, or Great-leaved Sea-side Grape. Leather-coat Tree.

****

Class and Order.

Octandria Trygynia.

(Nat. Ord.—Polygoneæ.)

Generic Character.

Perianthium 5-partitum corollatum. *Nux* monosperma perianthio baccato tecta.

Specific Character and Synonyms.

Coccoloba* *pubescens;* foliis orbiculato-cordatis maximis subsessilibus infra pubescentibus, racemis fructiferis erectis (?).

Coccoloba pubescens. *Linn. Sp. Pl. p.* 523. *Willd. Sp. Pl. v.* 2. *p.* 457. *Ait. Hort. Kew. ed.* 2. *v.* 2. *p.* 421. *Spreng. Syst. Veget. v.* 2. *p.* 252.

Coccoloba *grandifolia;* foliis subrotundis, integerrimis, rugosis. *Jacq. Amer.* 113.

Scortia, arbor Americana amplissimis foliis aversâ parte nervis extentibus hirsutie ferrugineâ refertis. *Leather-coat Tree* Barbadensibus nostris. *Pluk. Phyt. Tab.* 222. *fig.* 8. *pessimè.*

Descr. According to Jacquin, this becomes an ineligant, upright *Tree,* between sixty and eighty feet in height, dividing above into not more than two or three branches. *Leaves* very large, some of which attain to two feet in diameter, orbicular with a cordate base, entire, dark green and glossy above, covered with more or less of a short, ferruginous down beneath, where the nerves are of a lighter colour, and very prominent. The whole leaf strongly reticulated. There is scarcely any petiole, but at the base of the disk, which is formed by the confluence of the nerves,

---

* κοκκος, *seed,* and λοβος, *a lobe*: from the lobed seed, not *fruit,* as stated in No. 3130. *(Hensl.)*

are the sheathing stipules inveloping a bud (*a*), which terminates a short *branchlet*. *Branchlets* at first green, and looking like petioles to the leaves. *Branches* formed from a succession of these branchlets, brown, cylindrical, scarred alternately from the fallen leaves, and bearing a bud (*b*) immediately over each scar. *Raceme* terminal, *(imperfectly developed in the specimen)*. *Pedicels* single, longer than the flower or fruit, with a minute scale and sheath at their base. *Flowers (imperfectly expanded)*. *Perianth* small, of five, fleshy segments, united for more than two-thirds of their length, investing the germen, spherical. *Stamens* eight *(imperfectly developed)*, originating from a white membrane, which coats the inner surface of the perianth, and becomes free just beneath its divisions. *Germen* more than half-inferior, (according to common notions, but strictly speaking *superior*,) ovate, subtrigonous. *Styles* three, exserted. *Stigmas* dilated, flat, truncate, jagged. The immature and unfertilized *berry*, consists of the fleshy perianth investing a nut composed internally of cullular substance with traces of three imperfect dissepiments. The ovule is in the middle of its substance, towards the upper part, attached to a long, straight, umbilical chord, and having the foramen a little oblique at the summit.

This tree is a native of the West Indies, and is said by JACQUIN to be very common in the mountain forests of Martinique. The wood is hard, heavy, deep-red, and almost incorruptible. When used for posts, the part beneath the ground becomes as hard as stone. The fruit is said to be eatable. It had not flowered before in England, though introduced since 1690, with the C. *uvifera*.

I received the drawing for this plate and its description from the Rev. Professor HENSLOW of Cambridge; who informs me that he made them from an old plant in the Botanic Garden. This produced a single raceme, for the first time, in the beginning of February, 1832; but owing to the bad condition of the hothouse, which seldom allows of its retaining a temperature of more than a few degrees above 60°, none of the flowers appear to have expanded properly. There was, however, sufficient for him to ascertain some of the peculiarities in the inflorescence of this species, and to enable him to correct an error in our account of the fructification of C. *uvifera* (Tab. 3130). In the description and sections of that plant, the real nut has been overlooked. This is described by GÆRTNER, to be of the consistency of paper, and to become intimately united with the fleshy part of the berry, formed of the ripened perianth. In our plate, the *seed* has been figured and described as the nut. The real character, however, of the fruit of this Genus may be more readily seen in another species, C. *punctata*, where the nut is hard and bony, and we have added to our present plate three sections from an unripe berry, grown in the Cambridge Garden.

Fig. 1. Flower. 2. Germen. 3. Three of the Stamens *(imperfect)* attached to the Membrane which lines the Perianth. 4. The unripe Perianth cut vertically, showing the young Nut within, (*c*) where the Stamens are attached. 5. Vertical Section of the young Nut, showing the unimpregnated Ovule. 6. Transverse Section of the unripe Berry. All *magnified*.

C. *punctata*. Fig. 7. Vertical Section of the unripe Perianth, showing the nearly ripened bony Nut, at (*d*) are the remains of the Stamens. 8. Vertical Section of the Nut, with an eight-lobed Seed in the *lower* part. There are projecting ridges in the Nut corresponding to the Channels on the Surface of the Seed. 9. A transverse Section of the Seed, detached from its funiculus *(receptaculum)*.—All *magnified*.

[illegible]

PRIMULA SIBIRICA. SIBERIAN PRIMROSE.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—PRIMULACEÆ.)

Generic Character.

Flores subumbellati involucrati. *Calyx* tubulosus quinquefidus seu quinquedentatus persistens. *Corolla* tubulosa, fauce vel nuda vel glandulosa, limbo 5-lobo. *Capsula* apice decem-dentata polysperma. *Spreng.*

Specific Character and Synonyms.

PRIMULA *Sibirica;* glabra, nuda, foliis ovali-subrotundis petiolatis integerrimis vel obtuse crenatis, umbella pauciflora laxa nutante, involucri sub tetraphylli foliolis ovatis acutis basi calcaratis.

PRIMULA Sibirica. *Jacq. Misc. Austr. v.* 1. *p.* 161. *Willd. Sp. Pl. v.* 1. *p.* 806. *Lehman, Prim. p.* 60. *t.* 7. *Roem. et Schult. Syst. Veget. v.* 4. *p.* 143. *Spreng. Syst. Veget. v.* 1. *p.* 576. *Ledeb. Fl. Alt. v.* 1. *p.* 213.

PRIMULA rotundifolia. *Pall. It. v.* 3. *p.* 223.

PRIMULA intermedia. *Ledeb. Decad. Pl. in Mém. de l'Acad. des Sc. de St. Petersb. v.* 5. *p.* 519.

PRIMULA foliis ovatis glabris integerrimis, umbellis paucifloris, nutantibus. *Gmel. Fl. Sib. p.* 83, *t.* 46. *f.* 1.

DESCR. *Root* perennial, fibrous. *Leaves* radical, upon *petioles* about their own length, oval or roundish-oval, rarely subcordate, quite glabrous, and free from mealy powder, as is the whole plant, the sides often involute, the margins entire, or bluntly and obscurely crenate. *Scape* five to seven or eight inches tall, pale green. *Umbel* of five to six nodding *flowers,* with an erect, four-leaved involucre, whose leaflets are ovate acute, with a remarkably

inflated, obtuse, spur at the base. *Pedicels* an inch and a half to two inches long. *Calyx* subclavate, with a constriction near the base, most evident in the young calyx, five-toothed, teeth erect, obtuse: the whole is yellow-green, sprinkled with excessively minute purple dots. *Tube* of the *Corolla* slender, cylindrical, yellow, about half as long again as the calyx; *limb* of five broad, spreading, obcordate (with a deep notch) purplish rose-coloured segments; the faux elevated, deep orange-yellow, ten-rayed. *Stamen* placed a little within the throat: *anthers* yellow, almost sessile, reaching to the mouth of the tube. *Germen* ovate; *style* about half as long as the tube of the corolla. The *Capsule*, according to LEDEBOUR, is longer than the calyx.

The *Primroses* are universal favorites in our gardens, and many have been long cultivated and figured. The present is, perhaps, among those least known in collections, and assuredly among the most beautiful. Our Glasgow Garden owes the possession of it to the Cambridge Botanic Garden, whence it was sent by Mr. BIGGS to Mr. MURRAY. It is a native of the Northern regions of Siberia, and of the Altaic Mountains, whence we have specimens from Dr. FISCHER: but like other plants from countries where the winters are much severer than our own, this requires the protection of a frame in winter, which serves the same purpose as the covering of snow in its native regions. Thus treated, it flowers in April.

Fig. 1. Involucre. 2. Flower. 3. Pistil: *magnified.*

3168.

W.J.H. del.

Pub by S. Curtis Glazenwood Essex July 1 1832.

Swan Sc.

(3168)

EPACRIS ONOSMÆFLORA. ONOSMA-FLOWERED EPACRIS.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Calyx coloratus, multibracteatus: bracteis coloratis. *Corolla* tubulosa ; limbo imberbi. *Stamina* epipetala : *Antheris* supra medium peltatis. *Squamulæ* hypogynæ 5. *Capsula* placentis columnæ centrali adnatis. *Br.*

Specific Character and Synonym.

EPACRIS* *onosmæflora ;* foliis elliptico-lanceolatis acuminatis cucullato-concaviusculis quinquenerviis mucronatis petiolatis margine ciliatis, ramulis incanis, corollis cylindraceo-ventricosis tubo calycem acutissimum superante. *Cunn.*

EPACRIS onosmæflora. *Cunningham in Field's N. S. Wales, p.* 340.

DESCR. A rigid *shrub,* with numerous, erect, rather wavy *branches,* the ramuli downy. *Leaves* from half to three-fourths of an inch long, patent or somewhat squarrose, dark green, sessile, ovate, acuminate, coriaceous, rigid, concave at the base, obscurely five-nerved, entire, the point extremely sharp, the margins, especially below, ciliated. *Flowers* rather large, solitary, nearly sessile in the axils of all the upper and rather crowded leaves, thus appearing to form a bracteated or leafy spike. *Calyx* deeply five-partite,

---

* From επι, *above,* and ακρος, *a summit:* from the plant growing in elevated situations.

the segments lanceolate, subulate, membranaceous, white, erect, appressed, about half as long as the tube of the corolla, the base surrounded by several small, imbricated, lanceolate, greenish scales. *Corolla* white: *tube* oblongoventricose, nearly as long as the leaves; *limb* five-cleft, ovate, acute, patent, or reflexed. *Stamens* inserted just within the mouth of the tube. *Filaments* very short, scarcely any; *Anther* linear-oblong, one-celled, bright purple and papillose. *Pollen* pale yellow; its grains in threes. *Germen* globose, surrounded by five, yellow, glands. *Style* thickened about as long as the tube of the corolla, white, pellucid with a central line. *Stigma* capitate.

Discovered by ALLAN CUNNINGHAM, Esq. in October, 1822, in peaty bogs at Blackheath, on the Blue Mountains of New Holland, at an elevation of 3,400 feet above the level of the sea, and by him introduced to the Royal Gardens at Kew; whence our specimen was most obligingly communicated by W. T. AITON, Esq.

It was in flower and in great beauty in the greenhouse in the month of March 1832.

Fig. 1. Leaf. 2. Flower. 3. 3. 3. Anther in different points of view. 4. Grain of Pollen. 5. Pistil:—*magnified.*

3169.

W. J. H. delt.

Pub by S Curtis Glazenwood Essex July 1 1832

[illegible]

(3169)

TROPÆOLUM TRICOLORUM. THREE-COLORED INDIAN CRESS.

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—TROPEOLEÆ.)

Generic Character.

Cal. 5-partitus, lobo superiore calcarato. *Petala* 5 inæqualia, 3 inferiora minora aut evanida. *Stam.* 8 ab ipsa basi libera. *Carpella* 3 suberosa reniformia indehiscentia hinc sulcata rotundata. *Semina* magna, exalbuminosa, loculum suum implentia et hujus cavitati conformia. *Embryo* magnus: *cotyledonibus* 2 rectis, crassis, junioribus distinctis, dein arcte conferruminatis et etiam cum spermodermate adhærentibus, ima basi subdistinctis, radicula intra cotyledonum processus latente, tubercula 4 mox radicellas proferentia gerente.

Specific Character and Synonym.

TROPÆOLUM[*] *tricolorum;* scandens gracillimum, foliis peltatis profunde 6-lobis, lobis oblongo-obovatis obtusis integerrimis, calyce obovato in calcar longum attenuato, petalis obovatis obtusis unguiculatis calycem panlulum excedentibus.

TROPÆOLUM tricolorum. *Sw. Brit. Fl. Gard. t.* 270.

DESCR. *Root* tuberous. *Stem* filiform, much branched; *branches* entangled, purple, shining. *Leaves* alternate, petioled, palmato-digitate, round, (eight lines across) six-

---

[*] From τρωπαιον, *a warlike trophy,* "from the shield-like leaves and the brilliant flowers, shaped like golden helmets, pierced through and through, and stained with blood, which might very well justify such an allusion." *Sm.*

lobed, soft, slightly villous, especially below, where they are paler, veined, lobes unequal, obovato-elliptical, generally only one of them is mucronate: *petiole* an inch long, filiform, resembling the branches. *Peduncles* about two inches in length, solitary, opposite to the leaves, pendent, capillary, slightly thickened upwards. *Calyx* of a bright vermillion colour, pentagonal, five-cleft, the segments blunt, mucronulate, on the outside tipped, as well as the spur with purple, on the inside tipped with green, the whole inner surface glandular; *spur* erect, about one-third of the length of the peduncle, awl-shaped, nectariferous. *Petals* five, (three lines long,) yellow, subexserted, inserted below the incisions of the calyx, obcordato-spathulate, unguiculate, dilated at the base over a slightly swollen pit. *Stamens* eight, included; *filaments* glabrous, colourless, dilated at the base, and having on the outside of the insertion of each a pit, similar to that at the base of the petals: *anthers* yellow, cernuous. *Germen* glabrous, three-lobed, lobes keeled. *Style* glabrous, shorter than the stamens, grooved on three sides, three-toothed at the top, one of the teeth larger than the others and grooved.

This beautiful species flowered in the greenhouse of the Botanic Garden, Edinburgh, in March, 1832. *Graham.*

Fig. 1. Flower and Peduncle. 2. Flower laid open. 3. Petal. 4. Stamen. 5. Pistil:—*magnified.*

H.del^t

Pub by S Curtis Glazenwood Essex July 1 1832.

Swan

(3170)

HELLEBORUS PURPURASCENS. PURPLISH HELLEBORE.

****

Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Calyx persistens 5-sepalus, sepalis subrotundis obtusis magnis sæpe viridibus; *petala* 8—10 brevissima tubulata inferne angustiora nectarifera; *stamina* 30—60. *Ovaria* 3—10. *Stigmata* terminalia orbiculata; *capsulæ* coriaceæ; *semina* duplici serie disposita elliptica umbilicata. *D C.*

Specific Character and Synonyms.

HELLEBORUS[*] *purpurascens;* foliis radicalibus subtus subpubescentibus palmatisectis, segmentis basi cuneatis apice 3—5-lobis, caule bifloro, foliis floralibus subsessilibus, calycis sepalis subrotundatis coloratis. *D C.*

HELLEBORUS purpurascens. *Waldst. et Kit. Pl. Rar. Hung. v.* 2. *p.* 105. *t.* 101. *De Cand. Prodr. v.* 1. *p.* 47. *Spreng. Syst. Veget. v.* 2. *p.* 658.

DESCR. The *root* consists of a woody, tuber-like, truncated, rough stock, from which are emitted numerous simple or branched, descending, brown, fibres. When the plant is in flower, the *stem* is not a span high, terete, somewhat downy, purplish-green, having at the base many large, sheathing, membranaceous, reddish-green scales, which enclose the young, or scarcely emerging, leaves. This *stem*

---

[*] From ελειν, *to destroy,* and βορα, *food:* from the poisonous nature of these plants.

divides at the top into two branches, or bears two inclined, single-flowered *peduncles,* which have at their base a three to five-lobed, sessile, purplish leaf, the lobes lanceolate, more or less laciniated, serrated. *Flowers* drooping, large. *Calyx* of a singularly livid or purplish glaucous-grey colour: the sepals or leaves roundish concave, at length much spreading. *Petals* or nectaries about twelve, hypogynous, in a single series, spreading, standing close, obovate or cuneate, hollow, compressed, the mouth somewhat two-lipped, closed, the margins being a little involute. *Stamens* numerous. *Filaments* white. *Anthers* oblong, pale yellow. *Pistils* five, erect, upon a conical *receptacle.* *Germen* oblong, tapering into a long style. *Stigma* obtuse. When the inflorescence has passed, the root-leaves are in perfection, upon a long petiole, longer than the flower-stem, digitato-pedate, above smooth, beneath slightly downy, at length glabrous, the segments lanceolate, acute, serrated.

This *Hellebore,* so remarkable in the colour of its flowers, is a native of woods in Hungary, and is described and figured in the splendid work above quoted of WALDSTEIN and KITAIBEL. Our Glasgow Botanic Garden is indebted for the possession of it to Mr. HUNNEMAN. It is probably perfectly hardy: but we have kept it in a pot in a cool frame. It throws up its flower-stalks in March, and the leaves are in perfection in June.

Fig. 1. Petal (or Nectary). 2. Stamen. 3. Pistils. 4. Stigma: *magnified.*

W.J.H. del^{t}
Pub. by S. Curtis Glazenwood Essex July 1 1832.
Swan Sc

(3171)

ACROTRICHE OVALIFOLIA. OVAL-LEAVED ACROTRICHE.

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Calyx bibracteatus. *Cor.* infundibuliformis, *limbi* laciniis apice barba deflexa. *Drupa* subbaccata, putamine 5-loculari, celluloso !

Frutices *humiles ramosissimi, ramis sæpius divaricatis.* Folia *sparsa.* Spicæ *laterales v. axillares, breves.*—Flores *parvi albi.* Discus *hypogynus cyathiformis sublobatus.* Drupæ *parvæ, depresso-globosæ, substantia parca.* *Br.*

Specific Character and Synonyms.

ACROTRICHE * *ovalifolia;* foliis ovatis ovalibusque obtusis muticis planis margine lævibus, spicis axillaribus, drupis subcellulosis. *Br.*

ACROTRICHE ovalifolia. *Br. Prodr. v.* 1. *p.* 548.

STYPHELIA ovalifolia. *Spr. Syst. Veget. v.* 1. *p.* 656. *Roem. et Sch. Syst. Veget. v.* 4. *p.* 485.

DESCR. A low, tortuous, depressed *shrub,* scarcely more than six inches high, with numerous branches, which are copiously leafy. *Leaves* scattered, broadly ovate or oval, sessile or nearly so, coriaceous, obtuse, entire; dark green on the upper side, paler and distinctly veiny beneath, the veins dark-coloured and almost resembling parallel lines.

---

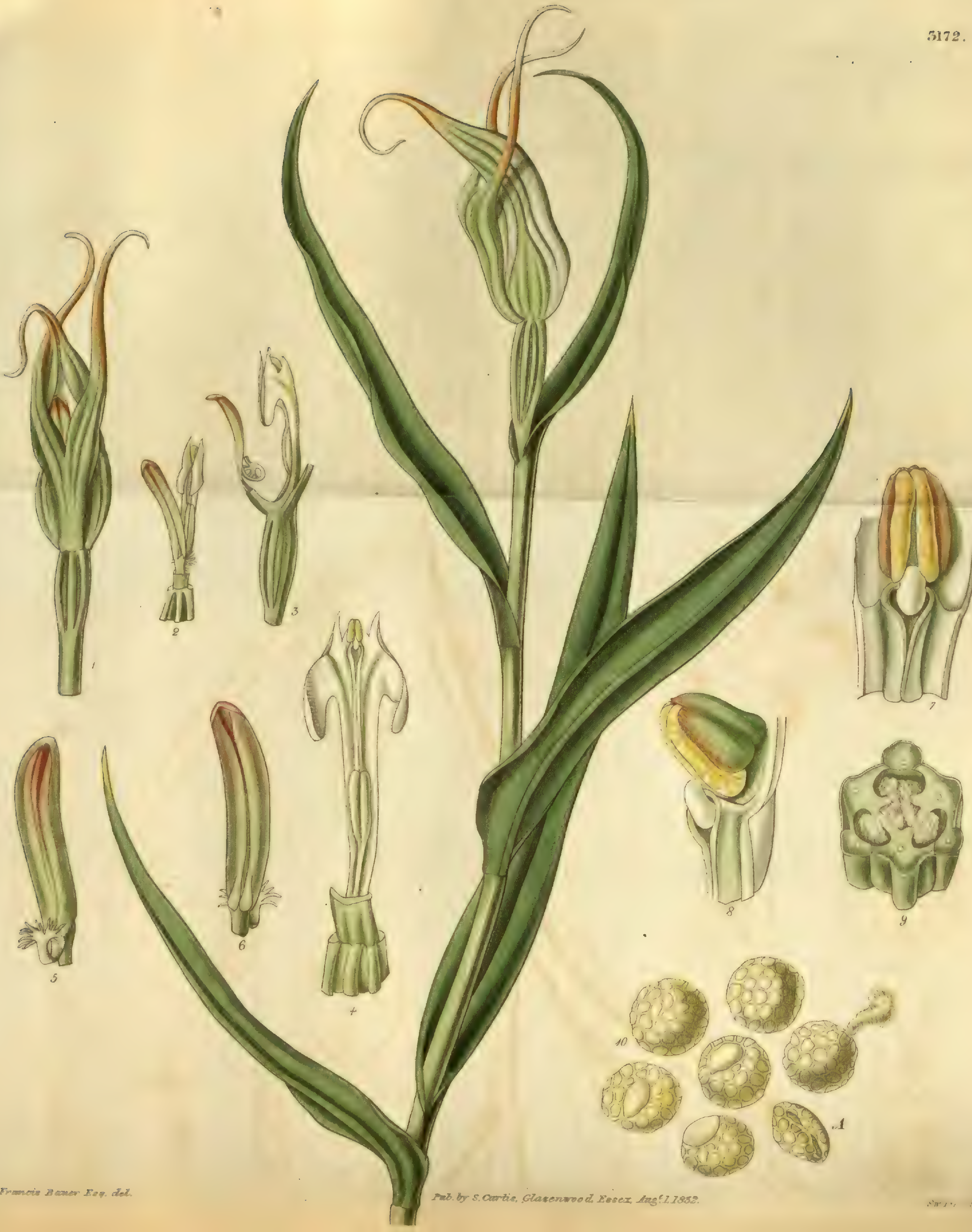
* *ακρος, a point,* and *θριξ, a hair:* from the tufts of hair at the extremity of the segments of the corolla.

Flowers minute, greenish-yellow, in dense, axillary, short *spikes* or *clusters*, most abundant on the underside of the branches. *Calyx* of five unequal, imbricated leaves or scales, scarcely different from the two or three bracteæ at the base, except in being larger, pale green. *Corolla* rather hypocrateriform than infundibuliform, the *tube* inflated, contracted at the mouth, and there closed with hairs; the *limb* of five linear-oblong horizontally spreading segments: near the extremity is a transverse tuft of rather thick hairs not quite erect, but a little inclined inwards. *Stamens* inserted into the mouth of the corolla, bent back, so that the oblong, orange-coloured *anthers* are lodged in the sinuses of the limb of the corolla. *Pistil: Germen* ovate, surrounded in its lower half by the large cup-shaped, lobed nectary. *Style* short, thick, dark green. *Stigma* obtuse.

Introduced to the Royal Kew Gardens, where it flowers in the month of March, by Mr. ALLAN CUNNINGHAM, and sent to us by Mr. AITON. The Edinburgh Garden is indebted to that source for the possession of the plant, where we saw it blossoming in 1831. As an ornamental greenhouse plant, it cannot boast of much beauty, until the flowers are examined with a microscope, when the delicate structure of the corolla, the singular tuft of hairs at the extremity of the segment of the corolla, and the rich orange-coloured anthers, lying in the sinuses of those segments, become apparent.

Mr. BROWN discovered the plant on the Southern shores of New Holland, and Mr. CUNNINGHAM found it "on the exposed summits of sandy ridges connected with '*Bald Head*,' King George's Sound," where he observed it, bearing its white, drupaceous fruit, in January, 1822.

Fig. 1. Flower. 2. Extremity of the Segment of a Petal, with its Tuft of Hairs. 3. Stamen. 4. Pistil and Nectary. 5. Back of a Leaf: *magnified*.


1
2
3
4
5
6
7
8
9
10
A

Francis Bauer Esq. del.

Pub. by S. Curtis, Glazenwood, Essex, Augt 1 1832.

Swan Sc.

PTEROSTYLIS BANKSII. LARGE-LEAVED PTEROSTYLIS.

* *

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium ringens tetraphyllum, foliolo inferioro bifido (e duobus infra cohærentibus conflato). *Labellum* unguiculatum, subinclusum. *Lamina* basi appendiculata v. gibbosa; *ungue* infra labio inferiore connato. *Columna* basi galea connata, apice alata. *Anthera* terminalis, persistens, loculis approximatis. *Massæ Pollinis* in singulo loculo binæ, compressæ, pulvereæ. *Stigma* medio columnæ adnatum.

Herbæ *terrestres, glabræ.* Bulbi *nudi, indivisi, caudicem descendentem radiciformem terminantes.* Folia *nunc radicalia stellata, nervosa, membranacea, scapo bracteato aphyllo; nunc caulina alterna radicalibus nullis.* Flores *solitarii rariusve racemosi, ochroleuci, sæpius majusculi.*

DIV. II. Appendix *apice diviso sæpius penicellato.* Folia *radicalia in planta florida nulla.* Caulis *foliosus. Br.*

Specific Character and Synonyms.

PTEROSTYLIS *Banksii;* caule folioso unifloro, foliis lato-lanceolatis inferne carinatis basi vaginantibus, labello oblongo ovato-subuncinato obtusiusculo columnam æquante, appendice pennicellato. *Cunn. in litt.*

PTEROSTYLIS Banksii. *Brown, in Herb. Banks.*

PTEROSTYLIS macrophylla. *Cunningham, MSS.*

Not having had the opportunity of seeing a living specimen of this extremely rare plant, I am unable to offer a description of it, and which, at best, would have given a very inadequate idea of the plant, in comparison with the accompanying figure, which is from the inimitable pencil of FRANCIS BAUER, Esq. The history of the plant I shall give in the words of Mr. ALLAN CUNNINGHAM, in the letter above quoted, and dated April, 1832. "When I was in New Zealand in 1826, I found on the bank of a stream which is received into the Bay of Islands, a PTEROSTYLIS, remarkable no less for the large size of its cauline leaves, than for its height, which exceeded a foot. On my return to Sidney, I carried with me some roots of this unpublished plant, which I transmitted to Kew, by an opportunity which then offered. There it had been long supposed to be dead, when, to the surprise of all of us, it has thrown up a perfect flower-stem, which I carried to Mr. BAUER, who has not only made a beautiful drawing of it, but has most kindly permitted me to send it to you to publish in the Botanical Magazine."

At this time Mr. BAUER had not examined the grains of Pollen; but when he had done so, and found them to be very different from those of Orchideous plants, he most liberally communicated his exquisite drawing of them through Mr. CUNNINGHAM; accompanying it with the following note: "I have now on the 2d of May, examined the Pollen Grains with PLOESSEL'S grand microscope, and, to my great surprise, found a total deviation from those of all the hundreds of specimens of Orchideous plants I have yet investigated. These grains, in their ordinary form, consist of three or four-celled corpuscules, or as Botanists express it, 'e sphærulis quaternis conflatis' (see BROWN, Prodr. p. 310.). I therefore send you herewith, a sketch of some grains of your plant, which are represented as seen under water, except that at *A*, which is in a dry state, when it appears collapsed. This I consider an important circumstance, and could not be detected by Botanists possessed only of glasses of moderate power."

These grains of Pollen as given here are magnified 570 times lineally, or 324,900 times superficially!

Mr. CUNNINGHAM had named the species P. *macrophylla*: but on showing the drawing to Mr. BROWN, that learned Botanist recognized it as the same with a specimen found by Sir JOSEPH BANKS in New Zealand, at the time he accompanied Captain Cook round the world in the Endeavour, and of which the plant, or the drawing, still exists in the Banksian Museum. Mr. CUNNINGHAM then readily consented to the wishes of Mr. BROWN, that it should bear the name of its first discoverer.

Fig. 1. A Flower of PTEROSTYLIS; *nat. size*. 2. Front view of the Fructification with the Labellum, *nat. size*. 3. A side view of the same; *nat. size*. 4. A front view of the parts of Fructification, with the Alæ forcibly expanded; *magnified* two times in diameter. 5. Front view of the Labellum *magnified* two diameters. 6. Back view of the same, *magnified* two diameters. 7. Front view of the Anther, the Stigmatic Gland, and a small portion of the Columna, *magnified* six diameters. 8. A side view of the same; *magnified* six diameters. 9. Transverse Section of a portion of the Ovarium; *magnified* four diameters, (F. BAUER). 10. Grains of Pollen as described above.

[illegible] Glazenwood Essex. Aug.t 1 1832 [illegible]

MAXILLARIA PLACANTHERA. FLAT-ANTHERED MAXILLARIA.

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium patens, resupinatum. *Labellum* cum processu unguiformi columnæ articulatum, trilobum. *Foliola* lateralia *exteriora* basibus cum processu columnæ connata. *Pollinia* 4, basibus connata, glandulosa (vel 2, pedicellata, pedicello basi glanduloso).—Herbæ *parasiticæ, bulbosæ, Americæ meridionalis.* Racemi v. scapi uniflori), radicales. *Lindl.*

Specific Name and Character.

MAXILLARIA *placanthera ;* bulbo ovato folioso, foliis lato-lanceolatis plicatis, scapo unifloro vaginato brevi, perianthii laciniis oblongis obtusis æqualibus maculatis lateralibus basi panlulum productis, labello angusto erecto trilobo, lobo medio transversim oblongo integerrimo, antheræ apice plano.

DESCR. Parasitic. *Bulb* ovate, compressed, bearing four to five oblongo-lanceolate, wavy, striated *leaves* at the extremity ; and, whilst young, sheathed and entirely concealed by many large, membranous, ovate, and acuminated scales, which wither before the bulb reaches its maturity. *Scapes* arising from among these sheaths, and at the base of the bulbs, single-flowered, each bearing two or three oblongo-lanceolate, membranaceous scales. *Flowers* large. *Petals* five, oblong, nearly uniform, obtuse, yellow-green, externally slightly spotted, internally more copiously marked with brown spots placed in lines, especially the two

inner petals. *Lip* much contracted at the base, applied to the column, three-lobed; two lateral lobes blunt, incurved, terminal one the largest, transversely oblong; the whole is greenish-white, spotted and streaked with purple. *Column* purplish-white, tapering at the base. Above the stigma is a three-toothed projection, the middle tooth slender and longer. *Anther* suborbicular, bidentate, quite flat on the top within, having four cells for the reception of the four orbicular, pale-yellow, *pollen-masses*, attached by their base to a gland which covers the central tooth on the top of the stigma.

For this new and well-marked species of MAXILLARIA we are again indebted to the rich collection of Mrs. ARNOLD HARRISON, who received the bulbs from her brother in Brazil, and who cultivates it with the same degree of success, with which she does so many other species of the Orchideous family.

Fig. 1. Labellum. 2. Column. 3. Anther. 4. Under-side of the Anther. 5. Summit of the Column from which the Anther is removed. 6. Pollen-Masses *magnified*.

3174.

W. J. H. delt   Pub. by S. Curtis, Glazenwood, Essex, Augt 1. 1832   Swan Sc.

ACACIA CINERASCENS. GREY FRAGRANT ACACIA.

****

Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum bivalve.—Frutices *aut* arbores, *habitu et foliatione valde varia.* Spinæ *stipulares, sparsæ aut nullæ.* Flores *flavi, albi aut rarius rubri, capitati aut spicati, decandri aut polyandri, eleutherandri aut monadelphi,* petalis 4—5 *liberis coalitisve constantes.*—SECT. I. PHYLLODINEÆ. *D C.*

Specific Character and Synonyms.

ACACIA *cinerascens;* phyllodiis oblongo-lanceolatis falcatis trinerviis glaucis acutis inferne attenuatis, spicis axillaribus terminalibusque subfasciculatis breviter pedunculatis, floribus 4-fidis, stylo staminibus duplo longiore.

ACACIA cinerascens. *Sieber Pl. Ex. Sicc. n.* 448. *De Cand. Prod. v.* 2. *p.* 454.

DESCR. A *tree,* with long, twiggy, decurved, angular, glabrous *branches,* which are of a brown colour but covered with a glaucous pruina, compressed upwards. *Leaves,* or rather *leaf-stalks (phyllodia)* large, scymitar-shaped, acute, with a curved mucro while young, much attenuated at the base, destitute of gland, three nerved, very glaucous. *Petiole* extremely short, scarcely any. *Spikes* long, cylindrical, pendent, arising several from nearly the same point towards the extremity of the branches. *Flowers* bright yellow, very fragrant, crowded. *Calyx* short, deep yellow, downy, four-toothed. *Corolla* of one, four-cleft, campanulate *petal*. *Stamens* numerous. *Style* filiform, glabrous, much exceeding the stamens in length.

This beautiful and most desirable ACACIA was introduced by Mr. ALLAN CUNNINGHAM to the Royal Gardens at Kew, whence Mr. AITON has favoured us with specimens, (which were in great perfection in April, 1832,) and Mr. CUNNINGHAM with some notes respecting the distribution of the Genus over the Continent of Australia, where it is observed that "it inhabits not only the southern coasts, but all parts of the interior that have been hitherto explored." "Wherever I landed," continues that zealous and intelligent Naturalist and Traveller, "during my four and a half years' voyage with Capt. KING, an ACACIA was sure to welcome me on my landing, and the last plant on which the eye rested, on those inhospitable steppes, to which Mr. OXLEY traced the Lachlan River, in 1827, (five hundred miles inland from Sidney) was my ACACIA *stenophylla*, a curious, slender tree, twenty-feet in height, with leaves from twelve to fifteen inches in length."

Fig. 1. Flower: *magnified.*

3175.

W J H Del.

Pub by S. Curtis, Glazenwood, Essex. Aug 1. 1832.

Swan Sc

PÆONIA OFFICINALIS, *var.* ANEMONIFLORA. ANEMONE-FLOWERED *var.* OF THE COMMON PÆONY.

****

Class and Order.

POLYANDRIA TRIGYNIA.

(Nat. Ord.—PÆONIACEÆ.)

Generic Character.

Calyx 5 sepalus foliaceus inæqualis. *Pet.* 5—10 suborbiculata. *Stam.* numerosa. *Discus* carnosus ovaria cingens. *Carpella* 2—5, grossa, stigmatibus bilamellatis crassis instructa, in folliculos capsulares conversa. *Semina* subglobosa nitida.—Radices *fasciculatæ.* Folia caulina *biternatim secta.* Flores *ampli albi aut purpurascentes. D C.*

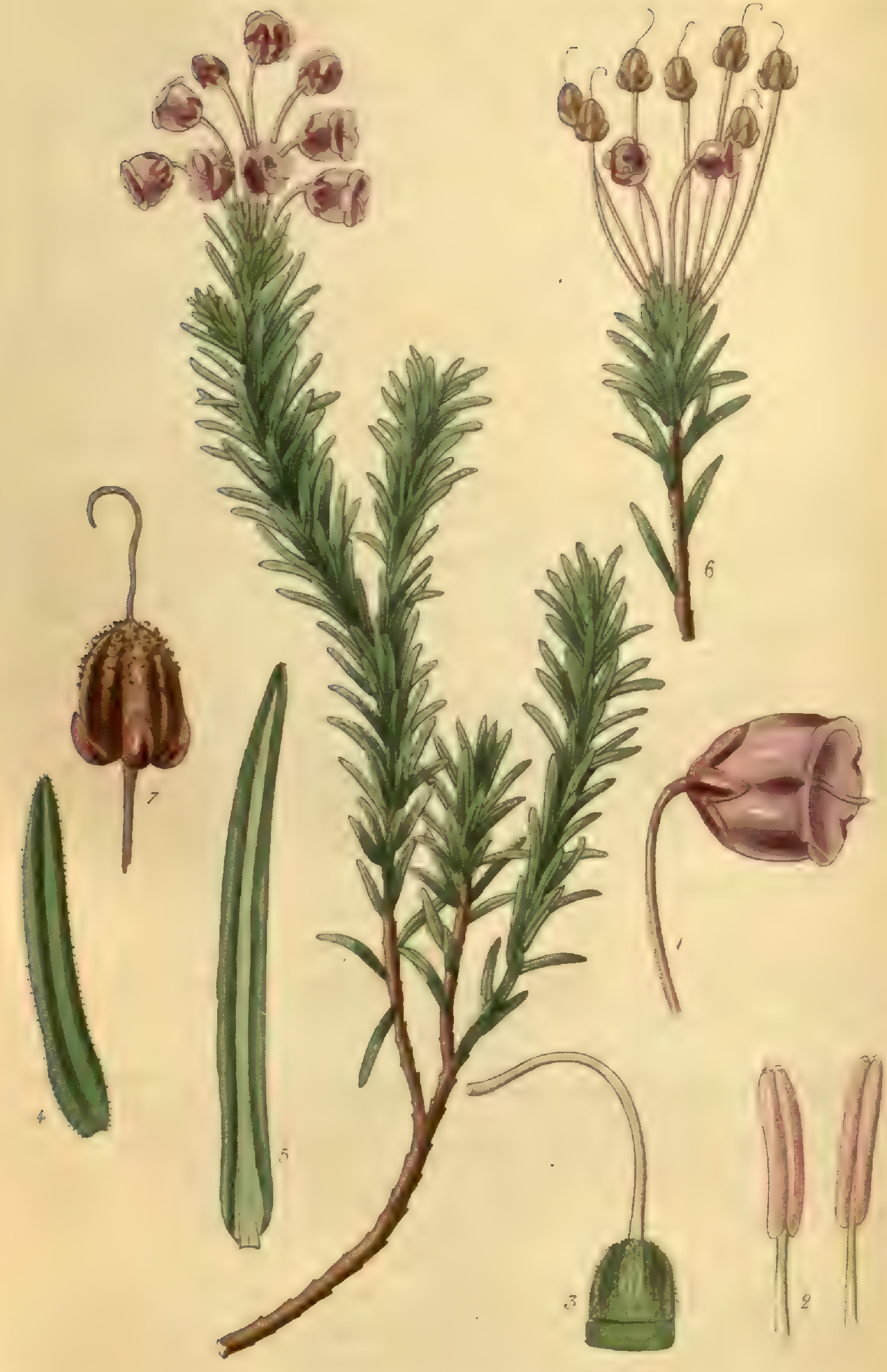
Specific Character.

PÆONIA *officinalis;* herbacea, carpellis tomentosis rectiusculis, foliorum segmentis inæqualiter laciniatis glabris, laciniis ovato-lanceolatis. *D C.*

PÆONIA officinalis *(vid. t.* 1784*).*

Var. anemoniflora. *Tab. nostr.* 3175.

This rich and very deeply-coloured Pæony has been obligingly communicated from the garden of the Rev. J. T. HUNTLEY of Kimbolton, who received it from the Prince DE SALM DYCK. It will be seen, that the stamens are converted into narrow, acuminated and spirally twisted petals, bearing the same relation to the original stock as the *Anemone-flowered,* or *Warratah Camellia* does to the true CAMELLIA *Japonica,* and it is scarcely less beautiful in its appearance.



W. J. H. del.

Pub. by S. Curtis, Glazenwood, Essex, Augt. 1. 1832

MENZIESIA EMPETRIFOLIA. CROW-BERRY-LEAVED MENZIESIA.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ERICEÆ.)

Generic Character.

Cal. profunde 4—5-fidus. *Cor.* 4—5-fida, ventricosa. *Stam.* 8—10. *Capsula* 4—5-locularis, marginibus valvarum inflexis dissepimenta sistentibus.

Specific Character and Synonyms.

MENZIESIA * *empetriformis;* foliis linearibus serrulatis, pedunculis aggregatis, floribus campanulatis erectis decandris, calycibus glabris obtusis basi gibbosis antheris filamenta æquantibus.

MENZIESIA empetriformis. *Smith in Linn. Soc. Trans. v.* 10. *p.* 380. *Pursh, Fl. Americ. Sept. v.* 1. *p.* 264. *Nuttall, Genera, v.* 1. *p.* 252. *Sprengel, Systema Veget. v.* 2. *p.* 202.

DESCR. A small, erect *shrub. Leaves* (six lines long, one line broad,) linear, on short, adpressed petioles, crowded, suberect towards the extremities of the branches, below spreading, when young, glanduloso-ciliated, afterwards glabrous, with a few cartilaginous, small teeth, especially towards the apices, slightly channelled above, fleshy in their sides, midrib somewhat depressed, flattened, and wrinkled. *Peduncles* (half an inch long,) erect, glandular, axillary, solitary, single-flowered, collected near the extremities of the branches, bibracteate at the base. *Bracteæ* ovate, concave, crenate, opposite. *Calyx* pentaphyllous, red without, green within, except on the edges, where it is red, glabrous, ciliated with minute, white hairs; leaflets blunt, wrinkled and gibbous at the base. *Corolla* (three lines long, two broad,) reddish-purple, campanulate, erect, glabrous, about three times as long as the calyx, five-toothed, teeth reflected. *Stamens* ten, of rather unequal length alternately, about the length of the germen; *filaments* rose-coloured, flat, linear; *anthers* purple, oblong, narrower at the upper end, as long as the filaments, connivent, grooved along the sides, but bursting by two terminal pores, attached by their backs to the filaments. *Pistil* exserted; *stigma* of five connivent, triangular teeth; *style* slightly curved, cylindrical, red; *germen* globular, green, glandular, five-locular; *ovules* very numerous, attached to a large, central placenta.

---

* Named by Sir J. E. SMITH in compliment to ARCHIBALD MENZIES, Esq. the companion of Capt. VANCOUVER in his Voyage round the world, one of the most excellent of men and the most liberal of Botanists.

This very distinct species of MENZIESIA was raised at the Botanic Garden, Edinburgh, from seeds communicated by Mr. DRUMMOND, on his return from the last expedition to North America under the command of Capt. Sir JOHN FRANKLIN, and, I believe, collected by Mr. DRUMMOND on the Rocky Mountains. It first flowered in November, 1831, but much more abundantly in May, 1832.

If Sir JAMES SMITH had seen the living plant, I think he would have given a different specific character. The leaves in the recent state are decidedly tumid, both above and below, being depressed only along the middle rib on either side. *(Graham.)*

Fig. 1. Flower. 2. Stamens. 3. Pistil. 4, 5. Leaves. 6. Branch of a Plant in Fruit (from the Herbarium). 7. Capsule :—all but fig. 6 *magnified.*

3177.

W. J. H. del. Pub. by S. Curtis, Glazenwood, Essex, Aug^t 1, 1832. Swan

ARBUTUS PILOSA. HAIRY ARBUTUS.

****

Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—ERICEÆ.)

Generic Character.

Cal. 5-partitus. *Cor.* urceolata, limbo reflexo 5-dentato. *Antheræ* dorso bi-aristatæ. *Bacca* 6-locularis, placentis laminas polyspermas sistentibus. *Spr.*

Specific Character and Synonyms.

ARBUTUS *pilosa;* caule frutescente procumbente piloso, foliis ovato-ellipticis ciliato-serrulatis coriaceis apice muticis callosis, pedunculis axillaribus unifloris elongatis nutantibus, antheris quadri-aristatis. *Graham.*

ARBUTUS pilosa. *Graham in Ed. New Phil. Journ. ined.*

DESCR. *Stem* branching from the root, prostrate, red, twiggy, covered with thickset, harsh, spreading, rusty-coloured hairs. *Leaves* (nine lines long, four and a half broad) scattered, spreading, and being turned to the light, are distichous, coriaceous, naked and shining on both sides, dark green in front, pale behind, ovato-elliptical, with a callous tip, but no mucro, veined, serrulate, each serrature being tipped with a hair similar to those on the stem, a very few also occasionally exist on or near the middle-rib behind. *Petioles* short, subappressed, and with rather tumid, axillary buds. *Peduncles* sparingly covered with a few fulvous hairs, solitary in the axils of a few of the terminal leaves, of which they are equal to one-half the length. *Bracteæ* ovate, scattered upon the peduncle, adpressed, larger and fewer upwards. *Calyx* five-cleft, persisting, white, glabrous within and without, spreading; segments ovate, acute, gibbous at the base. *Corolla* (three lines long,) ovate, white, five-toothed, teeth blunt and revolute. *Stamens* ten, arising from a small green disk; *filaments* white, covered with minute pubescence, swollen immediately above their origin, and there somewhat concave on their inner side, subulate upwards; *anthers* yellow, attached by their backs, ovato-oblong, each loculament with two, small, ascending awns, in front of which it opens by a pore. *Stigma* small, red, terminal, very obscurely five-lobed. *Style* erect, cylindrical, included, colourless. *Germen* ovate, green, rather more than half the length of the style, and equal to the filaments, slightly covered with obscure pubescence, and depressed on the top, where the style is inserted.

This species is nearly allied to ARBUTUS *mucronata*, which flowered in the Botanic Garden lately, and is figured in Bot. Mag. t. 3093, but is easily distinguished by the character given above. They undoubtedly belong to the same Genus, but whether they should be left as species of ARBUTUS, or removed to GUALTHERIA or ARCTOSTAPHYLOS, or erected into a new Genus, must be chiefly regulated by the fruit, which I have not seen. I doubt whether the calyx, though persisting, will become berried, as in GUALTHERIA, but the anthers are, as in that Genus, provided with four awns. The present species is a native of Mexico, and was raised by Mr. NEILL from seed received from Mr. DON. From Mr. NEILL we received it at the Botanic Garden. In both establishments it flowered during May, and is perfectly hardy. *Graham.*

Fig. 1. Flower. 2. Stamen. 3. Pistil:—*magnified.*

3178.

1
2
3
4
5
6
7
8
9
x

W. J. H. del.

Pub. by S. Curtis, Glazenwood, Essex, Augt 1. 1832.

FRANÇOA APPENDICULATA. APPENDICULATED FRANCOA.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—GALACINEÆ. *Don.*)

Generic Character.

Cal. 4-partitus, persistens. *Pet.* 4. *Stam.* 8 fertilia, totidem sterilia minuta cum iis alternantia. *Germen* 4-sulcatum. *Stigma* sessile 4-lobatum. *Capsula* 4-loba, 4-locularis, polysperma. *Semina* angulo interiori loculorum inserta.

Specific Character and Synonyms.

FRANCOA* *appendiculata;* caulescens, foliis lyratis denticulatis utrinque pubescentibus, lobo terminali maximo cordato obtuse angulato, floribus racemoso-spicatis.

FRANCOA appendiculata. *Cavan. Icon. vi.* 77. *t.* 596. *Pers. Synops.* 1. 445. *Sprengel, Syst. Veget. v.* 2. 262.

FRANCOA sonchifolia ? *Ad. Juss. Ann. des Sc. Nat.* 3. 192. *t.* 12.

DESCR. *Root* with several very leafy crowns. *Stems* short. *Leaves* (eight inches long) petioled, lyrate, with soft, slightly glutinous pubescence on both sides, bullate, undulate, strongly veined, denticulate, decurrent along the petiole; *lobes* blunt, the terminal one by much the largest, (in a vigorous plant six inches long, four and a half inches broad) bluntly angled, cordate at the base. *Flower-stalk* (two feet high) terminal, scape-like, having a few leaves at the base only, erect, straight, round, slightly tapering,

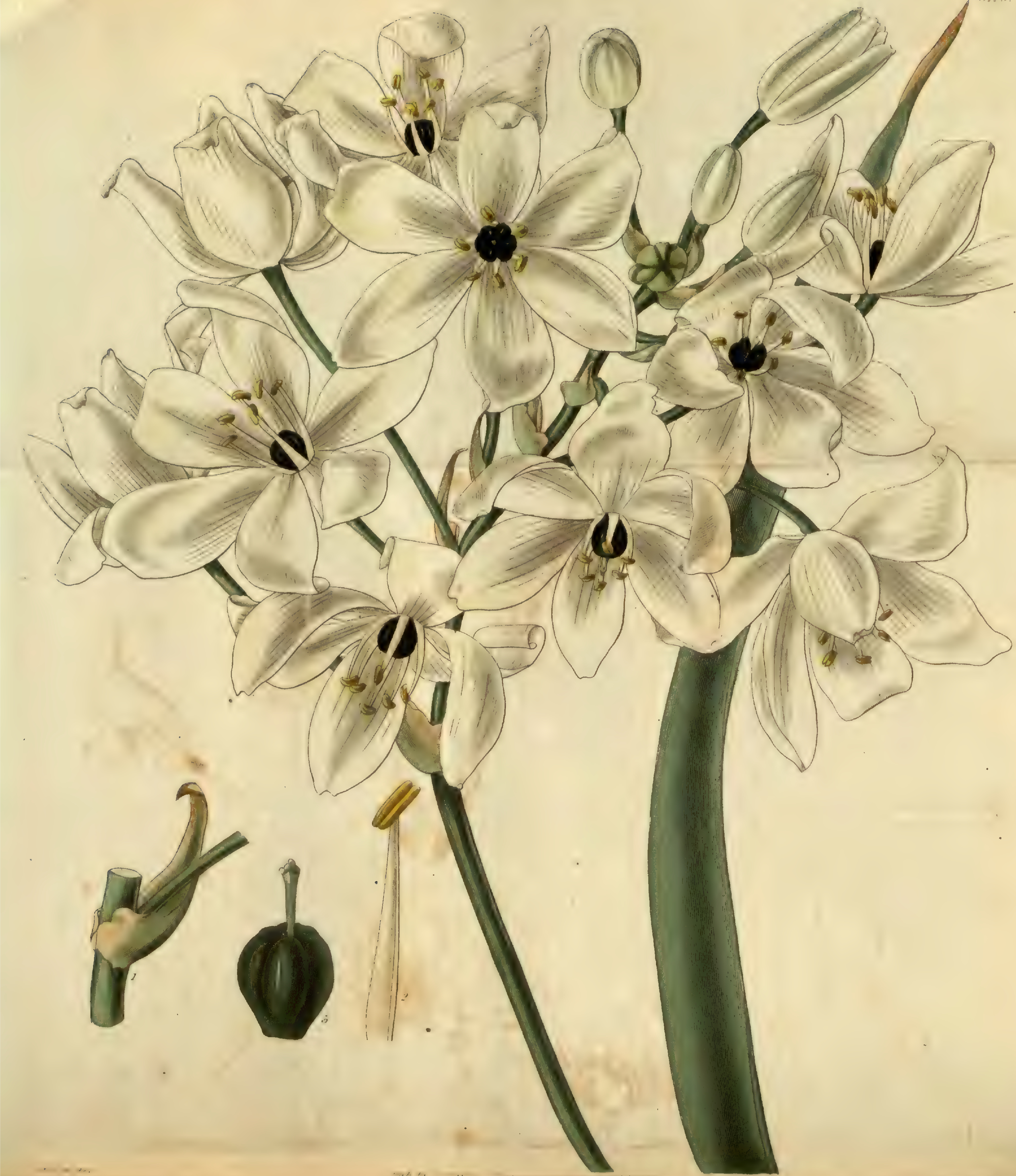
---

* Named in compliment to FRANCIS FRANCO, a Physician and Botanist of Valentia.

densely covered with pubescence similar to that on the leaves; from the axils on the stem-leaves and from a bractea near the top arise solitary erect branches, in all respects similar to the primary shoots, but smaller. *Spike* (six inches long) racemose, flowers (half an inch long, three-quarters of an inch across, when fully expanded) rather dense, springing from the axils of lanceolato-linear, green *bracteæ*. *Calyx* persisting, four to five-parted, green, rather longer than the pedicel, segments ovato-acute, three-nerved, glanduloso-pubescent within and without. *Petals* four to five, twice the length of the calyx, obovato-elliptical, channelled in front towards the short claw, keeled behind, of a pale rose-colour, with a darker spot in the centre, becoming lighter after expansion. *Stamens* eight to ten, shorter than the calyx, alternating upon an obscure but nectariferous disk, with short diverging scales (abortive stamens); *filaments* subulate, glabrous; *anthers* yellow, bilocular, oblong, bifid at both extremities, and slightly diverging at the lower, bursting along the sides, pollen yellow, granules small. *Germen* superior, oblong, four to five-furrowed, four to five-valved, and having as many loculaments, formed by the inversion of the margins of the valves. *Stigma* sessile, four to five-lobed, at first involute, then spreading, peltate, fleshy, surface tubercled. *Ovules* numerous, green, oblong.

This showy plant was introduced into the Clapton Nursery from Chiloe by Mr. ANDERSON. From Clapton it was obtained by Mr. CUNNINGHAM at Comely-bank, near Edinburgh, and communicated to Mr. NEILL's garden at Canonmills. In both these establishments, it flowered in May 1832. I have no doubt of this being the species of CAVANILLES, and very little about its being that of JUSSIEU, though the petals are figured (not described) by CAVANILLES as acute, and though the flowers are said by JUSSIEU to be without pedicels in his plant. The leaves correspond with CAVANILLES's, and the station is the same. His figure represents the flowers as secund, and a dried specimen, brought home by Mr. ANDERSON, and given to Mr. JAMES MACNAB, has the same appearance. *Graham.*

Fig. 1, 2. Flowers. 3. Petal. 4. Stamens. 5. Pistil. 6. Stigma. 7. Capsule (scarcely mature) with its Floral coverings *(nat. size)*. 8. Capsule separated from its Floral coverings. 9. Transverse Section of ditto. 10. Immature seeds: all but fig. 7, *magnified.*


1
2
3

ORNITHOGALUM CORYMBOSUM. PERUVIAN STAR OF BETHLEHEM.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Cor. 6-petala patens. *Filamenta* basi dilatata receptaculo inserta. *Caps.* 3-locularis. *Embryo* axilis. *Spr.*

Specific Character and Synonyms.

ORNITHOGALUM *corymbosum;* scapo tereti, floribus corymbosis, corolla magna, germine atro. *Ruiz et Pavon.*

ORNITHOGALUM umbellatum. *Ruiz et Pav. Fl. Peruv. v. 3. p.* 68. *t.* 300. *Lindl. in Hort. Trans. v.* 6. *p.* 86, *et in Bot. Reg. t.* 906. *Schultes, Syst. Veget. v.* 7. *p.* 512.

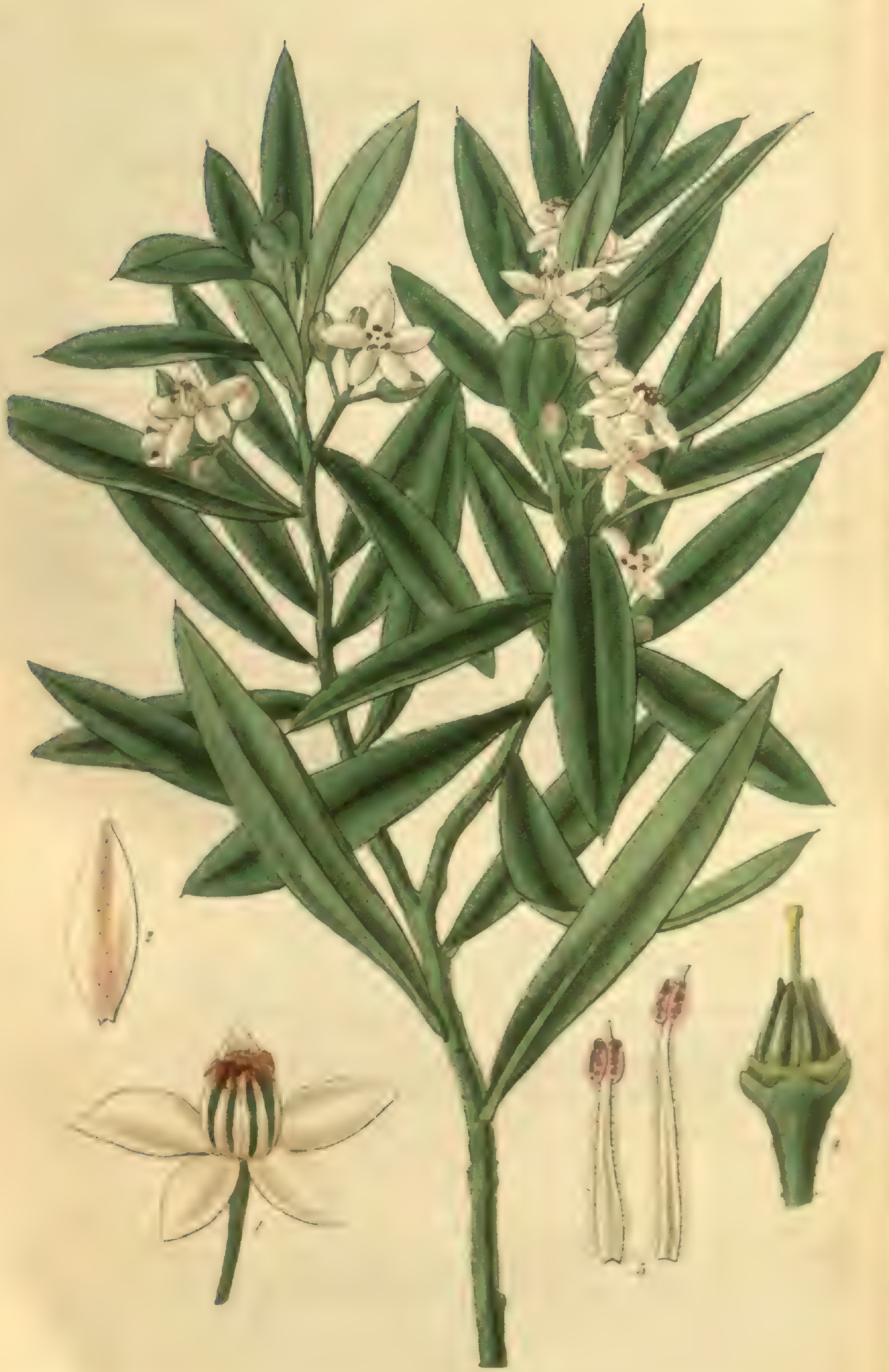
DESCR. *Bulbs,* according to RUIZ and PAVON, ovate, tunicated, and proliferous. *Leaves* a foot or a foot and a half long, linear, the apex acuminate, the sides involute, those of the young bulbs very narrow. *Scape* two to three feet high, terete, bearing a large, spreading, corymbose *raceme,* in our specimens of from twelve to sixteen flowers, two inches and a half in diameter, almost pure white. *Petals* obtuse, oval, spreading, the three inner ones rather narrower; the tips often bluntly two or three-toothed. *Stamens* opposite to the petals. *Filaments* white, broadly subulate, nearly erect. *Anthers* oblong, yellow. *Germen* turbinate, six-lobed, glossy, black-green: *Style* rather shorter than the germen: *Stigma* trigonal, downy. The *pedicels* are long, the lower ones especially, three inches and more in length, and subtended by a rather large, cordate, membranaceous, almost white, carinated *bractea,* attenuated into a long green point.

I

I follow **Ruiz** and **Pavon** and Professor **Lindley** in keeping this South American **Ornithogalum** distinct from the O. *Arabicum* of the Old World; although, as the latter author observes, " it is very like it, and perhaps a mere variety; remarkable, however, for being a native of a country far distant from any in which O. *Arabicum* has yet been found." —Still it must be allowed, that no distinctive character can be pointed out; and I cannot help suspecting, that it was introduced into Chili (where it is apparently wild) and into Peru (where it is only cultivated in gardens, and whence our bulbs were sent by Mr. M'Lean) by the early Spanish visitors. Be this as it may, it is a most desirable acquisition to our collections. The true O. *Arabicum,* if not a rare plant, is, according to Mr. Gawler (Bot. Mag. t. 728.) a very shy flowerer; while our bulbs blossom most readily, and bear so many and such large flowers in each raceme, that there is at this season of the year (March) scarcely a more desirable inmate of the greenhouse. Its fragrant flowers, we are told by **Ruiz** and **Pavon,** are used to ornament the hair by the Peruvian females.

Fig. 1. Bractea. 2. Stamen. 3. Pistil.—*magnified.*

5180



W. F. del. Pub. by S. Curtis, Glazenwood, Essex, Sept. 1, 1860. Swan Sc.

(3180)

ERIOSTEMON MYOPOROIDES. CUSPIDATE ERIOSTEMON.

****

Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—RUTACEÆ.)

Generic Character.

Cal. 5-partitus. *Pet.* 5. *Stam.* 10, *filam.* hispidis ciliatis aut nudis, antheris terminalibus. *Stylus* 1 brevissimus. *Carpella* 5 basi coalita. *Semina* in loculis 2 aut abortu solitaria. *Embryo* subcurvatus, radicula longa. *D C.*

Specific Character and Synonyms.

ERIOSTEMON * *myoporoides;* foliis oblongo-lanceolatis glaucescentibus mucronatis subtus præcipue glanduloso-punctatis, racemis umbellatis 4—5-floris axillaribus terminalibusque, calycibus petalisque glabris, filamentis ciliatis.
ERIOSTEMON myoporoides. *De Cand. Prodr. v.* 1. *p.* 720.
ERIOSTEMON cuspidatum. *Cunningham in Field's N. S. Wales, p.* 331.

DESCR. A robust, strong growing *shrub,* with numerous *branches,* soon covered with glandular, or rather, resinous warts. *Leaves* two to three inches or more long, sessile, rigid, subcoriaceous, linear-lanceolate, dotted with glands, which are larger and evident to the naked eye beneath, costate, entire, tipped with a short, often curved mucro. *Racemes* axillary, shorter than the leaves, umbellate, of from three to five moderately large white flowers. *Peduncles*

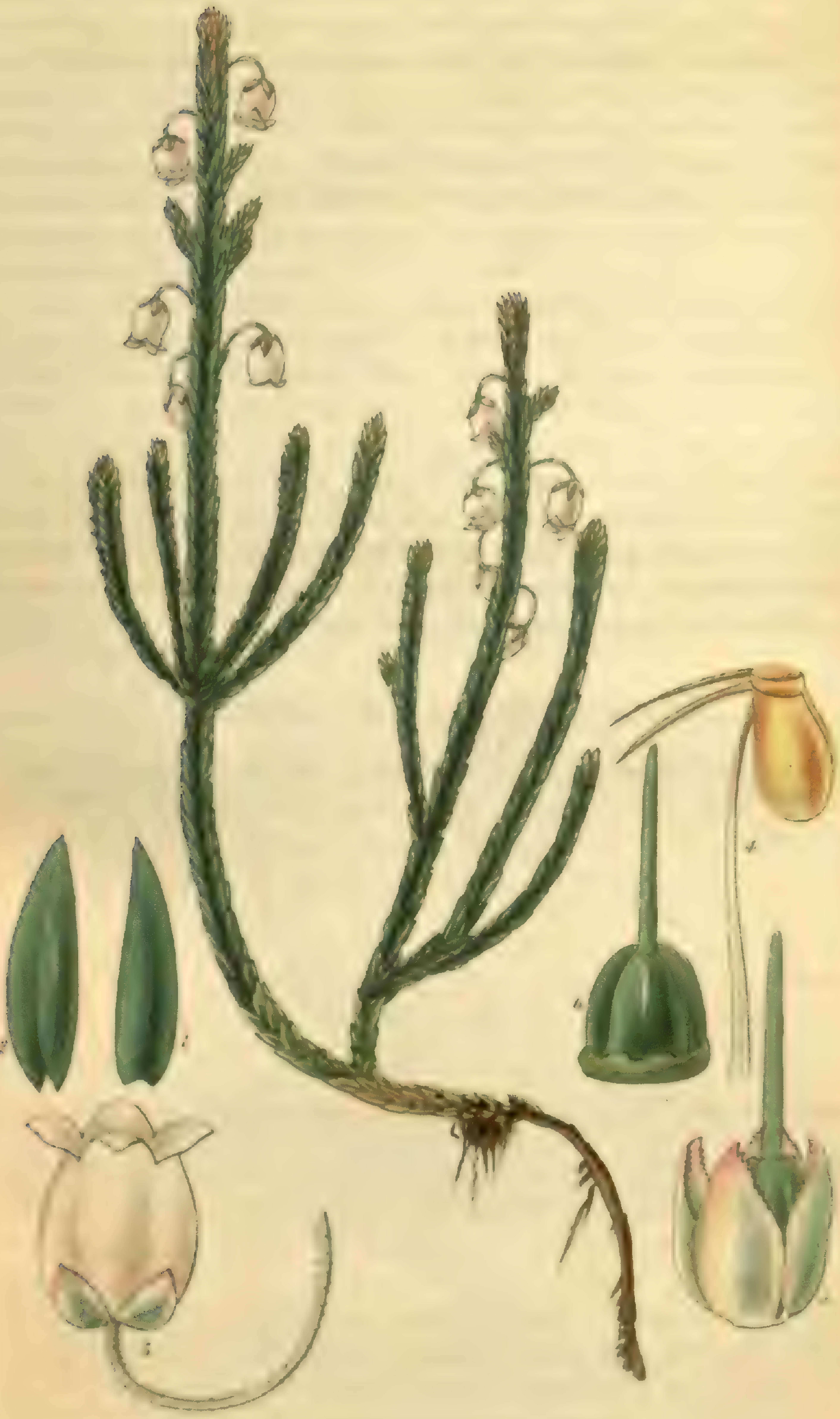
---

* εριον, *wool,* and στημον, *a stamen:* so called from the hairy or fringed filaments to the stamens.

cles and *pedicels* glandular, the latter enlarged upwards. *Calyx* very small, five-lobed. *Petals* five, oblongo-ovate, spreading, glandular at the back, and marked with a reddish brown line. *Stamens* ten, alternately smaller, all nearly as long as the style. *Filaments* subulate, white, ciliated at the margin. *Anthers* mucronate, flesh-coloured, the pollen deep red. *Pistil: Germen* of five, deep, ovate, acuminated lobes, glandular. *Style* about as long again as the germen. *Stigma* capitate. A glandular ring surrounds the base of the germen.

Discovered by Mr. ALLAN CUNNINGHAM, on rocky hills in the neighbourhood of Cox's River, on the western side of the Blue Mountains, New South Wales, flowering in October; and sent to Kew in the year 1823, and given in Mr. FIELD'S " New South Wales," under the appropriate name of E. *cuspidatum*. Mr. CUNNINGHAM could not possibly then have been aware that it was published the year before by M. DE CANDOLLE under the name by which Mr. AITON has now sent it from the Kew Gardens, where it blossoms in the early spring. In New Holland its season of flowering is October.

Fig. 1. Flower. 2. Petal. 3. Stamen. 4. Pistil, with a portion of the Pedicel and the Calyx.



Wm M'Nab del.

Pub by S Curtis Glazenwood, Essex, Sep 1.1832

ANDROMEDA TETRAGONA. FOUR-SIDED ANDROMEDA.

****

Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—ERICEÆ.)

Generic Character.

Cal. 5-partitus. *Cor.* subcampanulata, limbo reflexo. *Antheræ* bicornes. *Caps.* 5-locularis, marginibus valvarum nudis, columna centrali quinqueloba. *Spr.*

Specific Character and Synonyms.

ANDROMEDA *tetragona;* foliis quadrifariam imbricatis appressis subtriquetris obtusis glabris, pedunculis elongatis solitariis unifloris, corollis campanulatis. *Spreng.*

ANDROMEDA tetragona. *Linn. Fl. Suec. ed. 2. n. 356. Willd. Sp. Pl. v. 2. p. 607. Wahl. Fl. Lapp. n. 200. Pursh, Fl. Am. v. 1. p. 290. Spreng. Syst. Veget. v. 2. p. 289.*

ANDROMEDA pedunculis solitariis lateralibus, corollis campanulatis, foliis oppositis obtusis imbricatis revolutis. *Gmel. Fl. Sibir. v. 4. p. 120. n. 5.*

DESCR. *Stem* erect, woody, (about five inches high,) naked near the base, and marked by the scars of fallen leaves, much branched; *branches* suberect, the lower ones decumbent at the base and rooting. *Leaves* (two lines long) in four rows, closely imbricated, sagittate, concave in front, triquetrous, and furrowed over the midrib behind, blunt, slightly pubescent, particularly in native specimens, but the degree seems to vary, as does the colour, which is bright or dull green. *Peduncles* axillary, solitary, at first short, afterwards elongated, slightly pubescent, sheathed with scales at the base. *Flowers* drooping: *Calyx* five-parted, greenish tipped with red, glabrous, persistent, segments gibbous at the base. *Corolla* white, campanulate, somewhat contracted near the mouth, which is five-cleft, the segments blunt and spreading. *Stamens* included; *filaments* shorter than the pistil, erect; *Anthers* yellow, each with two slender, spreading, hispid bristles. *Pistil* scarcely longer than the stamens; *Stigma* obtuse; *Style* persisting, straight, slightly tapering upwards. *Germen* roundish-oval, obscurely four-lobed, depressed at the insertion of the style, and surrounded at the base by a wrinkled, glandular ring. *Capsule* erect, nearly globular, glabrous, with five cells, the dissepiments arising from the centre of the valves, which are inflected in their apices.

The seeds of this interesting little plant, which we hope may yet be found indigenous to Britain, were kindly communicated to the Botanic Garden of Edinburgh, by Dr. RICHARDSON and Mr. DRUMMOND, on the return from North America of the last expedition, under the command of Captain FRANKLIN. It flowered for the first time in April, 1832, in the same border with, though rather later than, its beautiful congener and native of the same country, ANDROMEDA *hypnoides*. We have two varieties, of which only one has yet flowered to reward the judicious treatment of Mr. M'NAB. It is the lighter coloured plant, and grows much the most freely of the two. *Graham.*

Fig. 1. Upper side of a leaf. 2. Under side of ditto. 3. Flower. 4. Stamen. 5. Calyx, including the Pistil. 6. Pistil.—*Magnified.*

3182

[illegible]

RULINGIA CORYLIFOLIA. NUT-LEAVED RULINGIA.

****

Class and Order.

PENTANDRIA PENTAGYNIA.

(Nat. Ord.—BUTTNERIACEÆ.)

Generic Character.

Petala 5, e cucullata basi ligulata. *Stamina* sterilia 5, indivisa *(Nectarium, Linn.)*. *Ovarium* 5-loculare; loculis dispermis. *Capsula*: septis duplicatis demum 5-partibilis. *Br.*

Specific Name and Character.

RULINGIA *corylifolia;* foliis ovato-deltoideis subcordatis basi lobatis supra hispidis subtus hirsuto-tomentosis, stipulis ovatis acuminatis, corymbis oppositifoliis, filamentis antheriferis simplicibus, sterilibus ovato-lanceolatis alternantibus. *Graham in Ed. N. Phil. Journ. June* 1832.

DESCR. A *Shrub,* branched from the base of the stem, branches slightly flexuose, tomentoso-villous, and somewhat viscid. *Leaves* (two inches and a half long, two inches broad) ovato-deltoid, slightly cordate, slightly lobed at the base, serrato-crenate, rugose, pubescent on both sides, but much more considerably behind, where also they are paler, bright green above, and when fading, becoming red, being very prominent behind; petioles slightly channelled above, villous, much shorter than the leaves, bistipulate. *Stipules* opposite, distinct from the petiole, ovate, acuminate, villous, and with long ciliæ. *Corymbs* collected near the apices of the branches, densely covered with white hairs in the primary and subsequent divisions, each division having on the outside a lanceolate bractea. *Flowers* pedicellate, white. *Calyx* pentaphyllous; leaflets cordate, villous both within and without, but much more harshly without, somewhat reflected in their sides, and forming a prominent edge where they meet each other. *Petals* pubescent, much smaller than the calyx-segments, concave, gibbous at their base, their sides formed into two blunt, parallel wings, which project towards the axis of the flower, apex extended into a blunt, linear appendage, at first curved towards the axis, but afterwards bent back, and passing out between the segments of the calyx. *Stamens* five (perfect), immediately within the petals, and alternating with the segments of the calyx, shorter than the petals, and included within their folds, alternating on the same urceolate border with, and somewhat shorter than, the ovato-lanceolate scales (abortive stamens), which are hairy on the outside, smooth within; *filaments* glabrous; *anthers* short, bilocular, bursting along the sides. *Pollen* yellow, granules round. *Stigmas* cohering to each other, small, capitate, colourless, shining. *Styles* five, glabrous, in contact in the centre of the flower, scarcely longer than the stamens. *Germen* five-lobed in its early stage, lobes conical and a little rough, afterwards rounded, green, depressed in the centre, and densely covered with stellate pubescence, five-locular, dissepiments from the edges of the valves, their two layers afterwards separating. *Ovules* two in each loculament, with a central ridge of the valve between them, both attached to the central column below its middle. *Pubescence* every where on the plant stellate, except from abortion, when, as on the upper surface of the leaves, it often appears single.

This plant was received last year by Mr. NEILL at Canonmills, and in the Botanic Garden, Edinburgh, from Mr. KNIGHT on the King's Road; both with Mr. NEILL and us, it flowered freely in the greenhouse in May last. *Graham.*

Fig. 1. Flower. 2. Flower, the Calyx, having been removed. 3. Petal. 4. Barren and fertile Stamens. 5. Side view of a Stamen. 6. Front view of an Anther. 7. Back view of an Anther. 8. Pistils:—*magnified.*

Pub. by S. Curtis Glazenwood Essex Sep. 1 1860

HIBBERTIA CUNNINGHAMII. MR. CUNNINGHAM'S HIBBERTIA.

****

Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—DILLENIACEÆ.)

Generic Character.

Stam. numerosa libera filiformia æqualia; *antheræ* ovato-oblongæ. *Ovaria* 1—15; *styli* filiformes inflexi. *Carpella* membranacea dehiscentia, sæpius 1—2-sperma. *Semina* exarillata. *D C.*

Specific Character and Synonym.

HIBBERTIA *Cunninghamii;* subvolubilis glabra, foliis alternis linearibus basi cordatis amplexantibus marginibus revolutis, staminibus exterioribus sterilibus, carpellis 5 glabris 4—5-spermis.

HIBBERTIA Cunninghamii. *Ait. MSS. apud Hort. Reg. Kew.*

DESCR. A somewhat twining *shrub,* with slender, branching *stems,* clothed with reddish, smooth bark; *branches* slender, straggling, zigzag. *Leaves* two to three inches long, glabrous, (as is the whole plant,) linear, more or less acuminated, entire, broader and cordate at the base, and somewhat amplexicaul, spreading, the margins somewhat reflexed. Young leafy shoots often spring from the axils, giving an appearance of the leaves being fasciculated. *Flowers* axillary, solitary, large, handsome. *Peduncles* an inch or more long. *Calyx* of five, imbricated, unequal, reddish-green, ovate, at length reflexed leaves. *Petals* bright yellow, obovate, much waved, especially at the margins. *Stamens* yellow, in two or three series, the outer of short, abortive filaments, the inner gradually larger, and bearing perfect, oblong *anthers.* *Pistils* five. *Germens* ovate, glabrous, one-celled, with four or five ovules. *Styles* curved, spreading. *Stigmas* obtuse, slightly capitate.

This very pretty plant, which grows to the height of a foot and a half or two feet, and on a warm sunny day is almost covered with its bright yellow but fugacious blossoms, was introduced by Mr. ALLAN CUNNINGHAM from King George's Sound to the Royal Gardens at Kew, whence it was liberally communicated to the Glasgow Botanic Garden, under the name adopted; a name likely to be still more intimately connected with the Botany of New Holland, than it has even yet been, now that Mr. RICHARD CUNNINGHAM is appointed to be the successor to Mr. FRASER, the late Colonial Botanist at Sydney, for which country he is very shortly to embark.

Fig. 1. Petal. 2. Stamens. 3. Pistils. 4. Pistil, with the Germen laid open to show the Ovules :—*Magnified.*

5141.

[illegible]

GREVILLEA ROBUSTA. GIGANTIC GREVILLEA.

****

Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—PROTEACEÆ.)

Generic Character.

Perianthium irregulare; foliolis laciniisve secundis; apicibus cavis staminiferis; *antheræ* immersæ. *Glandula* hypogyna unica dimidiata. *Ovarium* dispermum. *Stigma* obliquum depressum, (raro subverticale, conicum.) *Folliculus* unilocularis, dispermus, loculo centrali. *Semina* marginata, v. apice brevissime alata. *Br.*

Specific Character and Synonyms.

GREVILLEA *robusta;* foliis bipinnatifidis laciniis acutis: super glabris venosis subter canescentibus, racemis paniculatis, perianthiis pistillisque glaberrimis, stigmate e basi dilatato oblique conico. *Br.*

GREVILLEA robusta. *Cunningham MSS. Br. Prodr. Suppl. p.* 24.

GREVILLEA venusta. *Cunningham MSS. (non Br. Prodr.)*

DESCR. This forms a gigantic *tree,* eighty to one hundred feet in height, bearing numerous reddish-brown, dense, recurved branches, clothed with long bipinnated, rather rigid, somewhat coriaceous *leaves,* dark green above, and glabrous, pale and silky with appressed hairs beneath; the young leaves silky all over. *Racemes* branched at their base, hence somewhat panicled, elongated. *Flowers* slender, unilateral, longer than the pedicels, glabrous, tawny orange; laciniæ curved, spathulate.

For the drawing of this plant, which was made from a native specimen, (having never flowered in this country,) I am indebted to Mr. Allan Cunningham. It was accompanied by a reduced sketch of the plant, which he introduced to the Kew Gardens, the only one in Britain; but as it was scarcely suited to the nature of this publication, it has been reluctantly omitted. "This noble species of Grevillea," Mr. Cunningham remarks, "in the thick, moist woods on the banks of Brisbane River, vies in size and stature with the *Flindersia*, *Oxleya*, and other large forest trees: but by none is it surpassed in height in its native woods, except by the *Araucaria* of those regions, whose level-topped branching head is seen rising far above all the rest. Some aged trunks of Grevillea *robusta* I have found to measure nine feet in circumference; so that it is probably the largest tree of the order that has yet been discovered, surpassing both the Knightia of New Zealand, and the Orites *excelsa*, Br. of Port Macquarrie. From its deeply dissected foliage, and the silkiness of the under-side, it has obtained the name of "*Silk Oak*" among the pine-cutters of Moreton Bay; but its timber, which is of a tough fibre, has not been appropriated to any use."

Fig. 1, Flower: *magnified.*

3185

[illegible]

[illegible] Curtis Glazenwood Essex [illegible]

GREVILLEA CANESCENS. HOARY GREVILLEA.

****

Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—PROTEACEÆ.)

Generic Character.

Perianthium irregulare; foliolis laciniisve secundis; apicibus cavis staminiferis. *Antheræ* immersæ. *Glandula* hypogyna unica dimidiata. *Ovarium* dispermum. *Stigma* obliquum, depressum, (raro subverticale, conicum.) *Folliculus* unilocularis, dispermus, loculo centrali. *Semina* marginata, v. apice brevissime alata. *Br.*

Specific Character and Synonyms.

GREVILLEA (PTYCHOCARPA) *canescens;* foliis oblongo-obovatis obtusis mucronulatis, super pubescentibus mollibus, subter velutinis incanis pilorum cruribus adscendentibus, racemis recurvis, perianthiis sericeis laminis acutis, pistillis tomentosis. *Br.*

GREVILLEA canescens. *Prodr. Fl. Nov. Holl. Suppl. p.* 18.

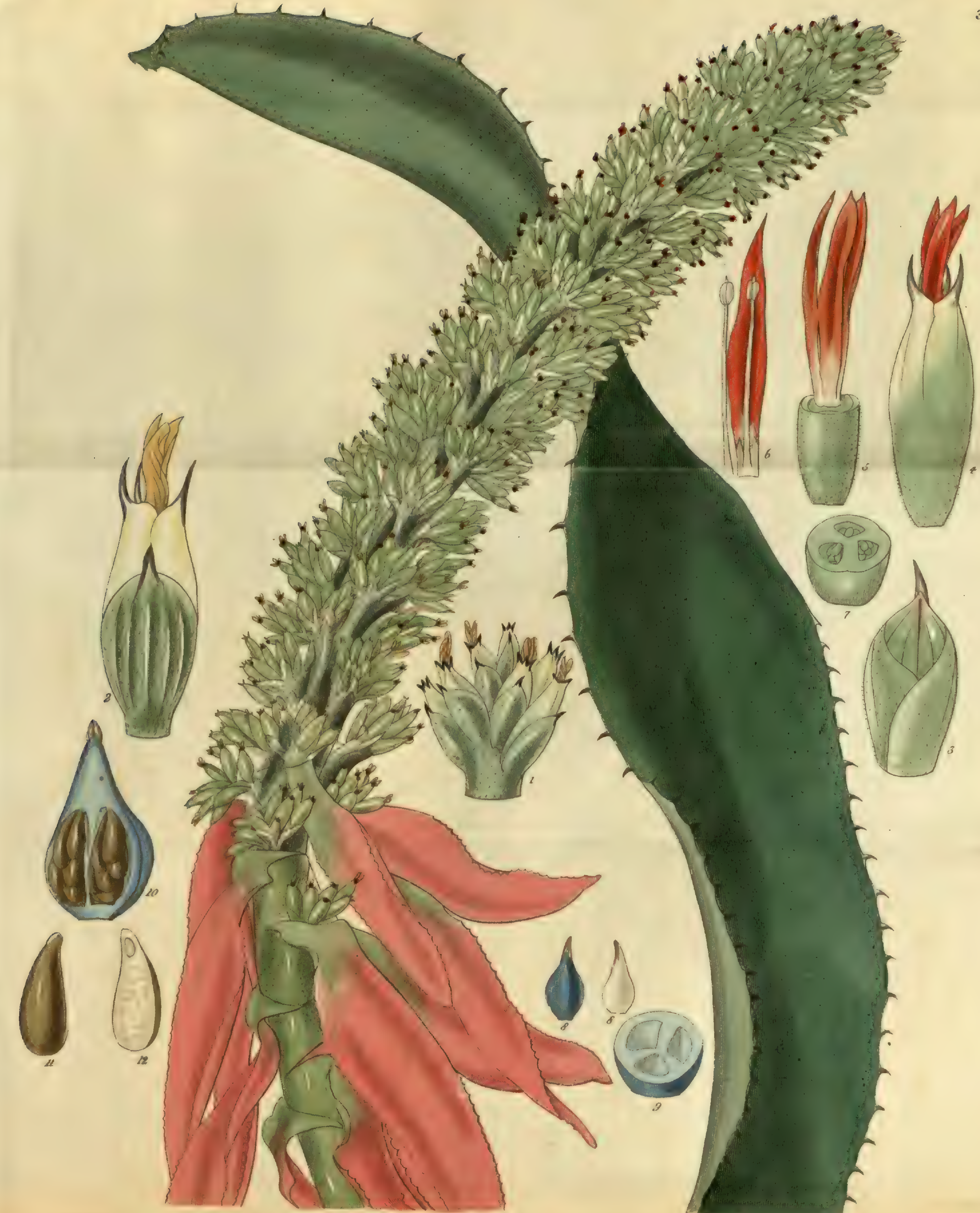
GREVILLEA cinerea. *Cunningh. in Field's N. S. Wales, p.* 329. *(non Br. Prodr.)*

DESCR. A much-branched, large *shrub,* with downy, ash-coloured *branches. Leaves* alternate, upon extremely short petioles an inch and a half long, oblongo-obovate, rather coriaceous, entire, obtuse, mucronate, pubescent, green above, beneath very downy and pale grey. *Racemes* terminating the branches, very downy, often bent down, *pedicels* reflexed. *Perianth* pale green, hoary with a dense down, of which the hairs are not appressed, curved like a horse-shoe, swollen towards the apex, and then suddenly and much acuminated so as to resemble the head and beak of a bird, separated on the upper-side by a fissure reaching down to the base; at the extremity it chiefly opens by a

transverse cleft, which gives that part still more the appearance of a bird's beak, within it is glabrous and dull orange-coloured, yellow-green at the swollen base, which is filled with honey. *Stamens* yellow, lodged in a cavity in each of the four segments near the apex; *filament* very short. *Germen* oblique, and as well as the long and thick *style,* green and hairy. *Nectariferous Gland* deep yellow. *Stigma* oblique, flat, green.

Communicated from the Royal Gardens of Kew, where it was introduced by Mr. ALLAN CUNNINGHAM in 1824, from the banks of Coxe's River and Rocky Hills beyond Bathurst, where that able and zealous Naturalist found it in the summer of 1823, bearing both flowers and ripened fruit at the same season. Mr. BROWN, in the Supplement to his Prodromus, notices, under GREVILLEA *canescens,* the great affinity between it and the G. *arenaria;* in our specimens (for both have been obligingly sent from Kew, and will appear in this Magazine,) the segment of the perianth is much more acuminated in the present species than in G. *arenaria:* in the latter too the colour of the flowers is dingy purple.

Fig. 1. Bud. 2. Flower. 3. Section of the Perianth seen from within. 4. Pistil. *Magnified.*


1
2
3
4
5
6
7
8
8
9
10
11
12

Pub by S. Curtis Glazenwood Essex Oct 1 1832

Swan sc.

(3186)

ÆCHMEA MERTENSII. MERTENS' ÆCHMÆA.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—BROMELIACEÆ.)

Generic Character.

Bracteæ 3, in cyatho connatæ. *Calyx* superus. *Petala* convoluta, distincta, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula* baccata. *Semina* nuda. *Lindl.*

Specific Character and Synonyms.

ÆCHMEA * *Mertensii;* racemo spicato denso pubescenti-lanato, floribus glomerato-fasciculatis, bracteis universalibus foliaceis coloratis, partialibus solitariis ventricoso-convolutis striatis calycibusque spina terminatis, petalis acutissimis, foliis ligulatis acutis lepidotis spinoso-marginatis inferne convolutis.

ÆCHMEA Mertensii. *Schultes, Syst. Veget. v.* 7. *p.* 1272.

BROMELIA Mertensii. *Meyer, Fl. Essequib. p.* 144. *Spreng. Syst. Veget. v.* 2. *p.* 21.

DESCR. *Leaves* radical, two feet and more long, erecto-patent, ligulate, acute, concave, coriaceous, dark-green above, paler and more yellowish beneath, on both sides dotted with minute, membranaceous, white scales, not at all fasciculated, convolute below, the margins beset with strong, deflexed, spinous teeth, of a dark-brown colour. *Scape* a foot or more long, terete, downy upwards, and there, and in the lower part of the spike, beneath the fascicles of flowers, bearing several oblongo-lanceolate, membranaceous,

---

* *αιχμη, a point,* from the rigid points on the calyces.

branaceous, spinoso-dentate, red, more or less downy, large *bracteas,* which are soon reflected and withered. *Raceme* nearly a foot long, stout, spicate, downy, composed of numerous, glomerated or fasciculated *flowers,* each subtended by a somewhat ventricose, green, striated, obtuse, downy, circumvolute *bractea,* more than half as long as the flower, which it closely embraces, having a strong and sharp dark-purple spine, just below the point. *Calyx* superior, of three erect, convolute, rather rigid, yellow, or greenish-yellow *sepals,* each terminated by a dark-coloured, rigid spine. *Petals* linear, acute, bright and deep rose-red, longer than the calyx, having two very obscure white scales near the base, afterwards changing to orange. *Stamens* six; three on the base of the petals, and three alternating with them. *Filaments* white, shorter than the petals: *Anthers* white, oblong-oval, with an acute point. *Germen* inferior, obovate, slightly downy, green, three-celled, each cell bearing many *ovules* attached to the upper part of the inner angle. *Style* as long as the filaments, white. *Stigmas* three, linear, white, downy, twisted. The *fruit,* which has been obligingly sent to me since the plate was completed, by Mr. SHEPHERD, and too late to have the whole figured, is extremely beautiful, consisting of numerous bright blue, ovato-acuminated *berries,* mixed with some white abortive ones, tipped with the withered remains of the perianth, and all collected together into a very compact oblong head. Each *berry* has three cells, and several oblongo-pyriform brown *seeds,* suspended from the top of the cells. *Albumen* between corneous and farinaceous. *Embryo* small, situated near the *hilum.*

For the introduction of this beautiful Bromeliaceous plant to the Botanic Garden of Liverpool, we are indebted to the great friend and patron of that Institution and of Botany in general, C. S. PARKER, Esq., who, whilst on a visit to Demerara, sent it, with many other rarities, from that country, where it is parasitical upon trees. Its noble yellow-green spikes, tipped with richly-coloured, erect, protruded portions of the petals, and the large red bracteas at the base, render this plant a most desirable inmate of the stove. It flowers in March and April.

I follow Dr. SCHULTES in referring this plant to ÆCHMÆA, which Mr. LINDLEY distinguishes from BILLBERGIA, by the three bracteas of the flower being united into a single cup-shaped one. This part, in our plant, is less distinctly cup-shaped than in RUIZ and PAVON's original *Æ. paniculata.*

Fig. 1. Fascicle of Flowers. 2. Single Flower with its Bractea. 3. Inner view of a Bractea. 4. Flower. 5. Ditto, from which the Calyx has been removed. 6. Petal and two Stamens. 7. Germen cut through horizontally. 8. 8. Berries, *nat. size.* 9. Section of a Berry, the Seeds being removed. 10. Vertical Section of a Berry showing two of the Cells filled with Seeds. 11. Seed. 12. Section of ditto: all but 8. 8. more or less *magnified.*

Scott del.

Pub by S Curtis Glazenwood, Essex. Oct^{r} 1 1832

CALOCHILUS CAMPESTRIS. FIELD CALOCHILUS.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium ringens, foliolis *lateralibus exterioribus* labello suppositis; interioribus sessilibus minoribus erectis. *Labellum* longius, sessile, acuminatum, disco intus marginibusque barbatum. *Anthera* stigmati parallela, persistens. Herbæ *glabræ.* Bulbi *indivisi, nudi.* Folia *caulina pauca, infimum canaliculatum, reliqua abbreviata.* Spica *racemosa, rara, floribus porrectis rufis majusculis. Br.*

Specific Character and Synonyms.

CALOCHILUS* *campestris;* labello perianthio parum longiore, acumine semilanceolato lamina 5-plo breviore, columna basi biglandulosa, bracteis ovarium superantibus, spica 4—8-flora. *Br.*

CALOCHILUS campestris. *Br. Prodr. Fl. Nov. Holl. p.* 320. *Spreng. Syst. Veget. v.* 3. *p.* 713.

DESCR. *Bulbs* two, oblong, undivided. *Stem* a foot or more high, rounded, erect, bearing two or three linear, acuminated, channelled, sheathing *leaves,* the lower one the longest. *Spike* racemose, of from five to eight extremely beautiful *flowers,* large in proportion to the size of the plant, and standing forward at right angles with the rachis; each subtended by a *bractea* longer than itself. *Calyx,* or three outer segments of the perianth, ovate, subacuminate, green, concave, the two lower, or anterior ones, placed beneath the lip, two inner ones similar in shape, but smaller, more inclining to yellow and streaked with red. *Lip* longer than the perianth, ovato-lanceolate, acuminate, the point reflexed, deep purple-blue at the base, the whole disk and margin covered with rich, velvety, yellowish-brown hairs, purplish-red in the centre. *Germen* club-shaped, twisted, stalked.

---

* καλος, *beautiful,* and χειλος, *a lip,* from the labellum being clothed with exceedingly beautiful hairs.

It is to be regretted that, notwithstanding the great number of Australian plants, which are now the pride and ornament of our collections, but few of the terrestrial ORCHIDEÆ have been sent to this country; and we therefore learn with much satisfaction, that Mr. ANDERSON, the Botanical Collector in Captain KING's late voyage of discovery, who is recently gone to New Holland, will particularly direct his attention to this singular and beautiful tribe, and transmit their roots to England.

The present plant is one eminently worthy of cultivation, and is probably of frequent occurrence in its native soil. Mr. BROWN, its original discoverer, found it not only about Port Jackson, but in the tropical parts of New Holland, and Mr. ALLAN CUNNINGHAM gathered it on stony hills, near Bathurst. Our drawing was made from the living plant in Van Diemen's Land, by Dr. JOHN SCOTT, who detected it in low, shaded grounds; but who observes, that it is rarely met with in that island.

Mr. BROWN remarks, that the Genus is nearly allied to NEOTTIA.

Fig. 1. Column and Germen, with the two inner Segments of the Perianth. 2. Lip. *Magnified.*

3188

W J H del.

Pub by S. Curtis Glazenwood Essex. Octr 1 1832.

Swan Sc

(3188)

Symphytum Caucasicum. Caucasian Comfrey.

****

Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Boragineæ.)

Generic Character.

Cal. 5-partitus. *Cor.* cylindrico-campanulata, fauce fornicibus subulatis in conum conniventibus clausa. *Nuces* basi perforatæ. *Spreng.*

Specific Character and Synonyms.

Symphytum * *Caucasicum;* caule ramoso inferne hirsuto superne glutinoso, foliis ovato-lanceolatis basi attenuatis semidecurrentibus hirsutis, calycibus obtusis.

Symphytum Caucasicum. *Marsch. Bieb. Fl. Tauric. Cauc.* —*Spreng. Syst. Veget. v.* 1. *p.* 563. *Graham in Ed. New Phil. Journn. June,* 1832.

Descr. *Stem* (two feet high) hairy near the bottom, higher up pubescent and viscous, slightly winged, flexuose, branched. *Leaves* ovato-lanceolate, hairy on both sides, but less harshly on the upper, and there, when young, subviscid, half-decurrent, the lower ones attenuated at the base, the upper pair oblique, sessile, and alternate. *Racemes* terminal, geminate, many-flowered, secund, and involute, common *peduncle* and *pedicels* glanduloso-pubescent. *Calyx* angled, the angles and blunt teeth ciliated; when in fruit, distichous. *Corolla* at first red-purple, but losing this colour as soon as it expands, and acquiring a lively azure hue; *tube* longer than the calyx, sparingly and minutely pubescent on the outside, having a white, fleshy, narrow edge projecting internally from its base over the disk, teeth of the limb blunt and revolute in their edges, teeth of the throat erect, blunt, and having short, chrystalline ciliæ on their edges. *Stamens* included, about as long as the teeth; *filaments* purplish; *anthers* yellow, rather shorter than the free portion of the filaments, bifid at both extremities. *Pistil* rather longer than the stamens; *stigma* bilobular, rounded; *style* slightly tapering, glabrous, lilac; *germen* light yellowish-green, seated on a white disk. The unripe *Achenia* are rough, irregularly depressed over their surface; and each is raised on a sandglass-shaped portion of the disk, the upper lobe of which projects from its lower side a simple row of short, dependent, subulate hairs.

---

* συμφυω, *to unite,* from the supposed healing virtues of some of the species.

The seeds of this plant were received at the Royal Botanic Garden, Edinburgh, from Dr. FISCHER, under the name here adopted, in 1830, and they blossomed, for the first time, in May, 1832. The profusion of lively-coloured flowers in this kind of Comfrey, which is less deformed by coarseness of herbage than others, makes it one of the most desirable for cultivation. *Graham.*

Fig. 1. Flower. 2. Two of the Scales of the Corolla and Stamens: *magnified.*

3189.

Pub by S. Curtis Glazenwood Essex Oct 1 1832

ŒNOTHERA SPECIOSA. LARGE, WHITE-FLOWERED EVENING-PRIMROSE.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ONAGRARIÆ.)

Generic Character.

Cal. tubulosus, 4-partitus, deciduus. *Petala* 4. *Capsula* cylindrica vel prismatica, 4-locularis. *Semina* nuda cortice fungoso placentæ columnari centrali affixa. *Spreng.*

Specific Character and Synonyms.

ŒNOTHERA *speciosa;* puberula, caule suffruticoso, foliis oblongo-lanceolatis utrinque attenuatis serratis subpinnatifidisque nervosis subtus pubescentibus, floribus racemosis, racemo nudo primum nutante, petalis obcordatis stamina æquantibus (seu longioribus,) capsulis obovatis angulatis. *D C.*

ŒNOTHERA speciosa. *Nutt. in Journ. of Sc. Phil. v.* 2. *p.* 119. *Hook. Exot. Fl. t.* 80. *De Cand. Prodr. v.* 3. *p.* 50. *Spreng. Syst. Veget. v.* 2. *p.* 230. *Sweet, Br. Fl. Gard. v.* 3. *t.* 253.

DESCR. *Root* perennial. *Stem* three to four feet high, slender, weak, flexuose, suffruticose, rough with minute pubescence, cylindrical, green, slightly branched. *Leaves* distant, scattered, broadly lanceolate, attenuated at the base, denticulato-serrate at the margin, acute, nerved, glabrous above, minutely pubescent beneath. *Flowers* in terminal racemes, at first drooping. *Peduncle* very short, with a small, narrow, foliaceous bractea at the base. *Calyx* superior, tubular at the base; the *limb* of four linear segments, but adhering for the greater part of their length,

opening entirely, only on one side to admit the expansion of the corolla, and standing out nearly horizontally. *Petals* four, placed upon the summit of the tube of the calyx, very large, obversely cordate, spreading, waved, pure white, yellow at the base, and sending upwards several yellowish-green, slightly diverging nerves, becoming rose-coloured previous to decay. *Stamens* eight, inserted just within the tube of the calyx. *Filaments* nearly equal in length to the corolla, erect, alternately shorter. *Stamens* long, linear, placed transversely, with their centre on the top of the filament. *Pollen* yellow, cohering together, and hanging attached to the stamens, stigmas, and style, in great abundance, after the bursting of the cells. *Germen* inferior, subclavate, but slightly attenuated at both ends, and quadrangular, pubescent. *Style* filiform, longer than the stamens. *Stigmas* four, spreading cross-wise, linear, afterwards pendent.

As I suspected, when I first described this plant, ten years ago, in the Exotic Flora, this fine and fragrant species of Evening Primrose has proved perfectly hardy, producing its lovely cream-coloured blossoms, which change to rose-colour in decay, in the open border, during the months of July and August. It was discovered by the American Botanist, Mr. Nuttall, on the plains of the Red River, in the Arkansa territory of North America, and communicated to the Glasgow Botanic Garden by Mr. Dick, of Philadelphia, who kindly transmitted some seeds, which had ripened under his own care. Like some other species of this Genus, the scent of the blossoms is most powerful in the evening.

The flowers continue many days in perfection, and are most fully expanded at the approach of night.

Fig. 1, 2. Leaves: *nat. size.*

Mr. P. McNab del.

Pub by S. Curtis Glazenwood Essex. Oct. 1. 1832.

Swan sc.

TROPÆOLUM PENTAPHYLLUM. FIVE-FINGERED INDIAN-CRESS.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—TROPÆOLEÆ.)

Generic Character.

Cal. 5-partitus, lobo superiore calcarato. *Petala* 5 inæqualia, 3 inferiora minora aut evanida. *Stam.* 8 ab ipsa basi libera. *Carpella 3,* suberosa, reniformia, indehiscentia hinc sulcata rotundata. *Semina* magna, exalbuminosa, loculum suum implentia et hujus cavitati conformia. *Embryo* magnus: *cotyledonibus* 2, rectis, crassis, junioribus distinctis, dein arcte conferruminatis et etiam cum spermodermate adhærentibus, ima basi subdistinctis: *radicula* intra cotyledonum processus latente, tubercula 4 mox radicellas proferentia gerente. *De Cand.*

Specific Character and Synonyms.

TROPÆOLUM *pentaphyllum;* foliis digitato-quinatis, foliolis ovalibus integerrimis petiolatis, petalis duobus subrotundatis subsessilibus calyce multo brevioribus.

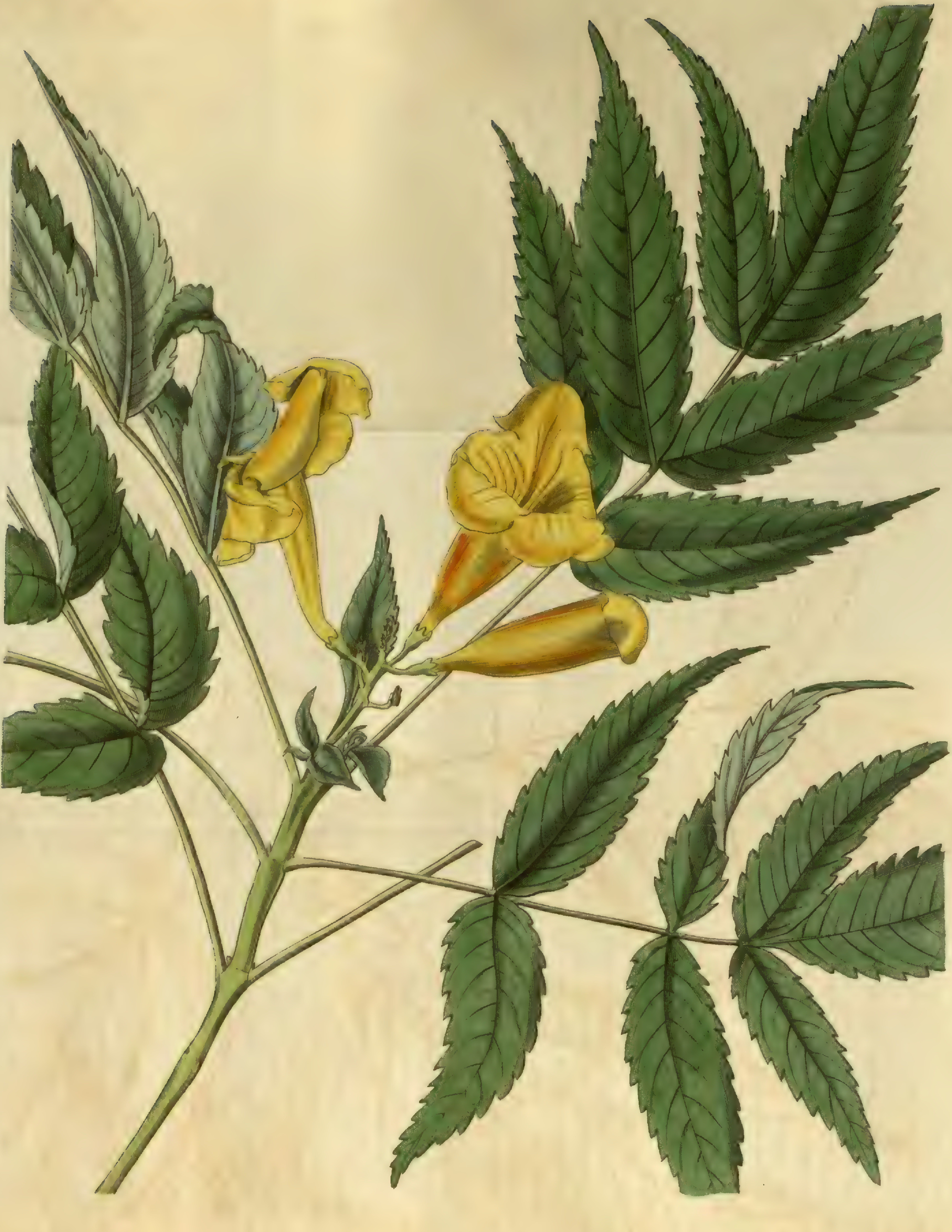
TROPÆOLUM pentaphyllum. *Lam. Encycl. Method. v.* 1. *p.* 612. *Illustr. t.* 277. *fig.* 2. *Willd. Sp. Pl.* 2. 299. *Pers. Syn. v.* 1. *p.* 405. *De Cand. Prodr. v.* 1. *p.* 684. *Spreng. Syst. Veget. v.* 2. *p.* 226. *Graham in Ed. New Phil. Journ.* 1832.

DESCR. *Root* tuberous, large, oblong. *Stem* slender, greatly elongated, slightly twisted, round, glabrous, coloured, branched. *Leaves* (about two inches across) petioled, digitate, of five oblong, entire, petiolate, soft, glabrous, spreading leaflets. *Common petiole* (two inches long) twisted in form of a tendril, and forming the chief support of the stem, as well as the partial petioles and the veins of the leaf, purple and glabrous: *partial petioles* bordered by the decurrent leaflets. *Peduncles* (four inches long) solitary, axillary, longer than the leaves, purple, glabrous, thickening upwards, pendulous. *Calyx* (an inch and a quarter long) persisting; *spur* horizontal, fleshy, dull purple on the outside, yellow within, nectariferous, conical, till towards its apex, when it is contracted, thinner, and somewhat shrivelled, the apex being ovato-acute, fleshy and erect; *limb* (seven lines and a half across) five-parted, green, brighter and spotted or streaked with deep purple within, segments ovato-acute, the uppermost the narrowest, the two next to it the broadest. *Petals* two, small, roundish, subunguiculate, reflected, bright vermillion-coloured, inserted into the throat of the calyx on each side of the upper segment. *Stamens* eight, longer than the calyx-segments; *filaments* subulate, declined, closely streaked or spotted with purple, in the bud erect, turned out between the calyx-segments after the pollen is shed; *anthers* four-sided, oblong, truncated above and below, green; *pollen* green. *Germen* yellow, glabrous. *Style* yellow, three-sided, shorter than the stamens. *Stigmas* three, acute, diverging. *Fruit* tricoccous, glabrous, even.

Of this plant Mr. NEILL received at his garden at Canonmills a tuber, gathered by Mr. TWEEDIE, in 1829; it pushed out some feeble shoots, and is still plump and alive, though growing feebly; thus settling a question of which DE CANDOLLE was doubtful,—that the species is perennial. A cutting taken from it, and growing vigorously, flowered most freely, in the greenhouse for the first time, during June and July, 1832, and will probably ripen its seeds. From Mr. TWEEDIE I have excellent native specimens, gathered in hedges near Buenos Ayres. Its taste is very similar to that of TROPÆOLUM *majus*, but less pungent, and not so agreeable. *Graham.*

Fig. 1. Flower. 2. Stamen. 3. Pistil: *magnified.*

319



J Curtis delt   Pub by S. Curtis Glazenwood Essex Octr 1 1832.   Swan S

TECOMA STANS. ASH-LEAVED TECOMA.

****

Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.)

Generic Character.

Calyx 5-dentatus. *Corolla* subcampanulata, ore 5-lobo inæquali. *Stam.* 4, didynama: filamento quinto sterili breviore. *Capsulæ* dissepimentum contrarium.

Frutices, *raro* arbores. Folia *opposita impari-pinnata v. digitata.* Flores *paniculati.* *Br.*

Specific Character and Synonyms.

TECOMA* *Stans;* fruticosa, foliis pinnatis glabris, foliolis lanceolatis acuminatis profunde serratis, racemis terminalibus.

TECOMA Stans. *Juss.—Spreng. Syst. Veget. v. 2. p.* 834.

BIGNONIA Stans. *Linn. Sp. Pl. p.* 871. *Willd. Sp. Pl. v.* 3. *p.* 302.

BIGNONIA fruticosa, &c. *Browne, Jam. p.* 264.

Arbor, flore luteo, fraxini folio. *Plum. Ic. t.* 54.

APOCYNO affinis, &c. *Sloane, Jam. v.* 2. *p.* 63.

DESCR. A *shrub,* growing, according to authors, in its native country, to a height of eight or ten feet. *Leaves* opposite, stalked, pinnated with about three pairs of opposite, lanceolate, acuminated, deeply serrated, veiny, sessile, glabrous *leaflets,* dark-green above, paler beneath. *Racemes* of few flowers, terminal. *Flowers* large, handsome, golden-yellow, faintly striated. *Calyx* small, campanulate, five-toothed. *Corolla* rather infundibuliform than campanulate;

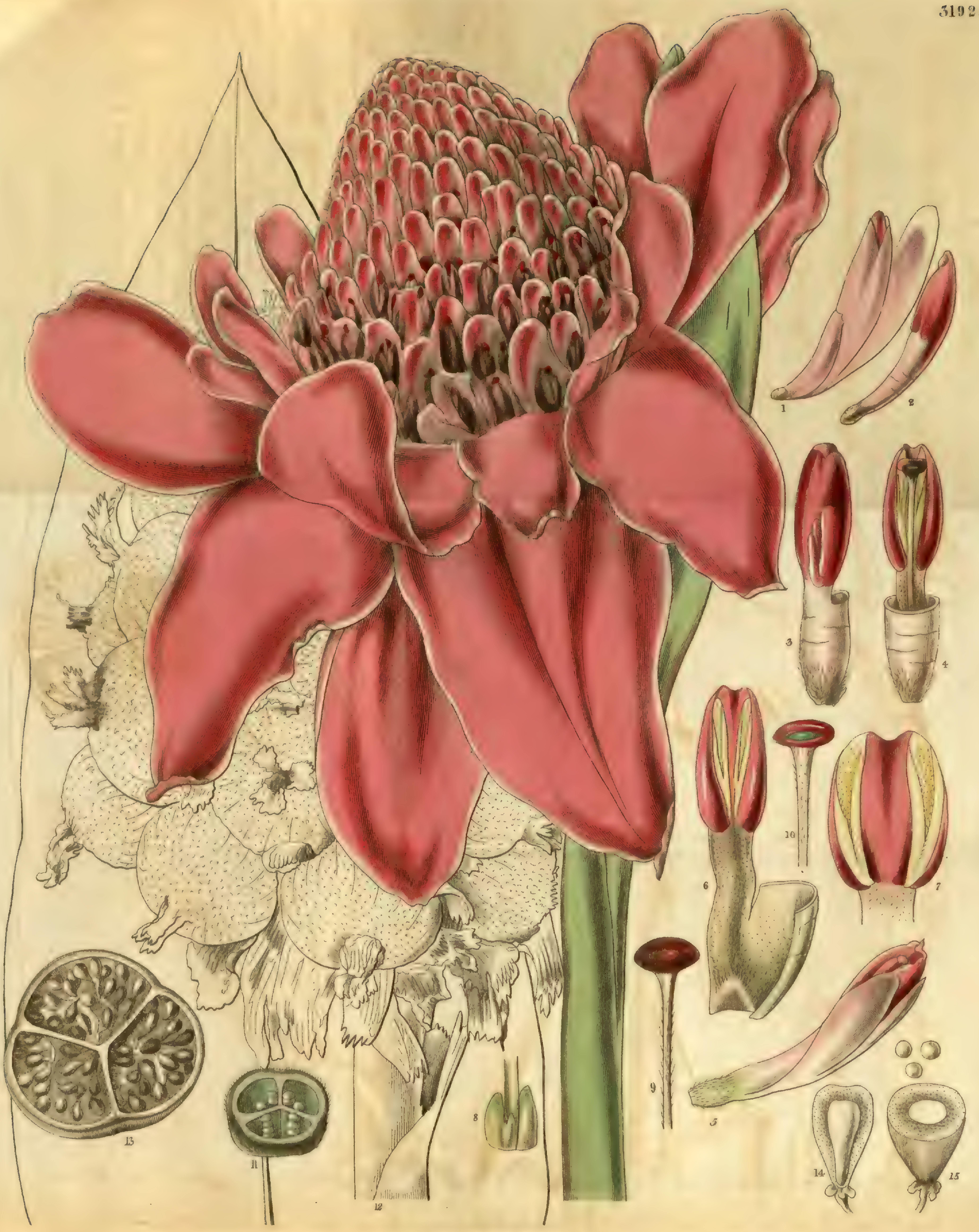
---

* From *Tecomaxochitl,* the Mexican name of one of the species.

panulate; the *tube* long, very slender at the base, gradually widening upwards; the *limb* large, of five broad, roundish, reflexed lobes. These flowers are succeeded by linear *capsules*, six to seven inches long, straight or slightly curved, coriaceo-membranaceous, remarkably compressed at their sides, so that each of the two valves into which the capsule opens constitutes a deep carina, into which the margins of the dissepiment are inserted, so that the dissepiment is contrary to the valves. *Seeds* numerous, imbricated upon the dissepiment on both sides and for its whole length, remarkably thin, and surrounded by a delicate membrane, much lengthened at both extremities.

Notwithstanding that this beautiful plant has been introduced to our gardens more than a century ago, it has never yet found a place in any of our botanical periodical publications. Perhaps its blossoms are of rare occurrence in our collections. I have never myself seen them in a recent state; and I describe the plant partly from dried specimens sent to me by Mr. JOHN LOCKHART, from Trinidad, and partly from the drawings made by Mr. JOHN CURTIS, in 1820; but from what collection is not stated. It is a native of the West India Islands, and of course requires the heat of the stove; where, according to the Hortus Kewensis, its season of blossoming is August.

TECOMA differs from BIGNONIA chiefly in the dissepiment of the capsule being contrary to the valves, instead of parallel with them.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

W. J. H. del.
Pub. by S. Curtis Glazenwood Essex Nov. 1 1832
Swan Sc.

ALPINIA? MAGNIFICA. MAGNIFICENT ALPINIA.

****

Class and Order.

MONANDRIA (rather DIANDRIA) MONOGYNIA.

(Nat. Ord.—SCITAMINEÆ.)

Generic Character.

Anthera duplex stylum amplectens. *Filamentum* erectum, simplex, anthera brevius. *Corollæ labium* inferius unilabiatum. *Rosc.*

Specific Character and Synonyms.

ALPINIA *magnifica**; scapo laterali, floribus numerosis in receptaculo communi aggregatis, labio angusto lineari apice ovato rubro albo-marginato, filamento styloque pubescentibus. *Rosc.*

ALPINIA magnifica. *Bojer's MSS. apud Herb. nostr. Roscoe Pl. Monandr. cum Ic.*

DESCR. *Root* large and thick, creeping, forming many knots and tubers, from the upper side of which arise the *stems* and *scape*, while from beneath are sent out several rather stout fibres. *Stems* ten to twelve feet high, erect, rigid, and thick in the lower part, narrower above, leafy. *Leaves* few, oblong, acute, with a midrib, and many oblique, rather closely-placed, parallel nerves; the *petiole*, (if it may be so termed) forming a long sheath around the stems. *Scape* five to six feet high, very stout, leafless, sheathed; the uppermost sheath is dilated, and forms a large, leafy, green *bractea*, within which the splendid *head* or dense capitate *spike of flowers* is produced. This is rendered the more striking from its numerous *bracteas* of a fine deep rose-red colour, all margined with a white line, the *outer* ones exceedingly large and spreading, often reflexed, three or four inches in length, ovate, acute, gradually becoming more obtuse as they are more internal, always barren; suddenly the *bracteæ* become smaller, oblong, very obtuse, erect, imbricated and fertile. *Flowers* shorter than the bracteæ, cylindrical, about an inch long: each consists of a small, inferior *germen*, slightly downy, three-celled, each cell with two vertical rows of ovules placed upon the dissepiment at a distance from the inner angle. From the top of this arise the floral coverings, combined with the filament of the stamens into a tube having a sort of cavity or nectary at the base within. *Calyx* of three imbricated, unequal, delicate, membranaceous, convolute, oblong leaves. *Corolla* of one piece, broadly ovate, deep purplish-red, convolute, enclosing the *stamen*, of which the lower part of the filament is membranaceous, (where it combines with the floral coverings,) the upper part broad, deep red-purple, thick, emarginate, the sides involute, enclosing the *style* and the *stigma* till the latter rises above it by the prolongation of the style: within, near the margin, are two yellow, one-celled, linear-oblong *anthers*, opening by a longitudinal fissure, and containing *pollen* in globular grains. *Style* filiform, white, having a two-lobed gland at its base. *Stigma* red, capitate, compressed, having on one side a transverse, green, depressed spot, which receives the pollen. This collection of flowers with the richly coloured bracteæ soon withers, and is succeeded by a large head of *fruit*, formed of many *capsules*, each as large as a chestnut, nearly globose, or obscurely three-lobed, downy, terminated by the withered floral coverings, and intermixed with the equally withered and ragged bracteas. These I have not seen with perfect seeds; but I have the opportunity of representing them and a section of a ripe capsule through the kindness of Mr. Telfair and M. Bojer. The latter capsule is three-celled, and contains numerous seeds apparently attached to branched funiculi (enveloped in pulp?) *Seeds* pear-shaped, having an *arillus* at the base, a copious *albumen*, and an *embryo* of the same shape as the seed, with its *radicle* pointing to the hilum.

---

* In honor of PROSPER ALPINUS, a Venetian, and Professor of Botany at Bologna towards the close of the sixteenth century.

In the month of August of the present year, Lord Milton was so kind as to communicate to me the splendid specimen

cimen here figured of **Alpinia** *magnifica*, which blossomed in his Lordship's stove at Wentworth. All that was hitherto known in Europe of this most rare plant was from a drawing and a dried specimen sent to me by **Charles Telfair**, Esq. from the Mauritius, where the plant is a native; and which was published in the work on Scitamineæ of the lamented **Roscoe**. Little did I then think, that in a few years we should see flowering specimens from our own stoves. But roots were, through the medium of Mr. **Telfair**, introduced by the late Mr. **Barclay**, and sent to Lord **Milton**'s collection, where, says Mr. **Cooper**, (through whose skill this plant has been brought to such perfection) " it blossomed for the first time in August, 1832. The scape rises up from under the leaf-stem, which is ten or twelve feet high, and about five inches in girth at the bottom."

Professor **Bojer** of the Mauritius has suggested the propriety of constituting this a Genus distinct from **Alpinia**, and I am quite inclined to agree with that Naturalist; but as I have not had the opportunity myself of seeing perfect fruit, and am too little acquainted with the structure of the allied Genera from an examination of recent specimens, I willingly leave to that able Botanist, who has living individuals at his command, the honor of establishing the discriminating characters; contenting myself with laying before the public a figure and description, however imperfect, of one of the noblest plants that has graced the pages of the Botanical Magazine.

Fig. 1. Flower and Bracteæ. 2. The same, from which the Calyx is removed, *nat. size.* 3. Front view of fig. 2. 4. Flower, the Calyx and Corolla being removed. 5. Entire Flower, *magnified.* 6. Staminal Filament and base of the Floral Tube. 7. Upper part of the Staminal Filament, with the two one-celled Anthers. 8. Base of the Styles, with the glandular body. 9. Back view of the Stigma. 10. Front view of the Stigma. 11. Section of the Germen. 12. Head of Capsules, *nat. size.* 13. Section of a ripe Capsule. 14 and 15. Vertical and transverse Sections of the Seed, with the " arillus" at the base (from Professor **Bojer** and Mr. **Telfair**'s drawings). —all but fig. 1, 2, and 12 more or less *magnified.*

3193.

W. J. H. del.

Pub by S Curtis Glazenwood Essex Nov 1 1832

Swan Sc.

(3193)

ASTRAGALUS ALOPECUROIDES. FOX-TAIL MILK-VETCH.

****

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. 5-dentatus. *Cor.* carina obtusa. *Stamina* diadelpha. *Legumen* biloculare aut semibiloculare, sutura inferiore introflexa. *D C.*

Specific Character and Synonyms.

ASTRAGALUS *alopecuroides;* caulescens suberectus, foliolis ovato-lanceolatis pubescentibus, stipulis ovato-lanceolatis acuminatis, spicis ovato-oblongis sessilibus, calycis laciniis setaceis tubo brevioribus corollam fere æquantibus. *D C.*

ASTRAGALUS alopecuroides. *Linn. Sp. Pl. p.* 1064. *De Cand. Prodr. v.* 2. *p.* 294. *Spreng. Syst. Veget. v.* 3. *p.* 297. *De Cand. Astragal. n.* 66.

ASTRAGALUS Alopecurus. *Pall. Astragal. t.* 8. *De Cand. Astragal. n.* 67.

DESCR. Perennial. *Stems* assurgent, rather stout, branched, zig-zag, angular, woolly, leafy. *Leaves* a span or more long, alternate, remote, pinnated: *Pinnæ* almost an inch long, alternate, ovato-elliptical, upon a very short stalk, rather dark green, and almost glabrous above, downy and paler beneath. *Rachis* woolly. *Stipules* very large and glabrous, membranaceous, from a broad base, lanceolate. *Flowers* axillary, sessile, in a large, broadly-cylindrical *spike* or *head,* bracteated, the outer *bracteæ* rather large, ovato-acuminate, the inner or upper ones gradually smaller, at length almost subulate. *Calyx* oval, inflated, membranaceous, densely clothed with long white wool, having five nearly equal, subulate teeth, shorter than the petals. *Corolla* lemon-coloured. *Vexillum* somewhat reflected, oblong, attenuated into a claw. *Alæ* and *Carina* with very long claws; the latter more deeply coloured: *Germen* ovate, very hairy. *Style* long, filiform. *Stigma* obtuse.

This is a very handsome species of ASTRAGALUS, and deserves a place in every collection of plants. Yet it does not appear to be common in our gardens, though introduced from Spain nearly thirty years ago, and though it is perfectly hardy.

Fig. 1. Flower. 2. Vexillum. 3. Alæ. 4. Carina. 5. Pistil:—*magnified.*

3194.

ames McNab del. June 1832 Pub by S. Curtis Glazenwood Essex Nov 1 1832 Swan. S

STYLIDIUM HIRSUTUM. HAIRY STYLIDIUM.

****

Class and Order.

GYNANDRIA TETRANDRIA.

(Nat. Ord.—STYLIDIEÆ.)

Generic Character.

Calyx bilabiatus. *Cor.* irregularis, 5-fida, lacinia quinta (labello) dissimili, minore, deflexa, (raro porrecta,) reliquis patentibus (raro geminatim cohærentibus). *Columna* reclinata, duplici flexura; *Antheris* bilobis, lobis divaricatissimis; *Stigmate* obtuso, indiviso. *Capsula* bilocularis, dissepimento superne quandoque incompleto. *Br.*

Specific Character and Synonyms.

STYLIDIUM *hirsutum;* scapo hirsuto villis acutis, racemo subsimplici, calycis labio ($\frac{2}{3}$)-partito, capsula ventricosa ovata, foliis linearibus basi attenuatis margine parum recurvis, squamis scariosis distinguentibus interioribusque acuminatis. *Br.*

STYLIDIUM hirsutum. *Br. Prodr. Flor. Nov. Holl.* 568, *Sp. Plant.* 3. 747. *Graham in Ed. New Phil. Journ.* 1832.

DESCR. *Root* of strong, hard, branching fibres. *Leaves* (six inches long) all radical, linear, glabrous, firm in their texture, edges revolute, attenuated at the base, interspersed with scariose glabrous scales, which become larger towards the innermost ones, these being terminated with a point resembling the leaves, but shorter. *Scape* (nine inches high) erect, simple, rather longer than the leaves, covered, especially at the base, with long, spreading, colourless, acute (not glandular) hairs, smoother upwards. *Raceme* (an inch and half long,) spicate, the uppermost flowers expanding first, each rising from the axil of a lanceolate, green bractea,

which is covered with hairs similar to those on the scape. *Pedicels* hairy, half the length of the primary bracteæ, and having secondary lateral bracteæ. *Calyx* bi- or tri-partite; *tube* very hairy, having both pointed hairs and others which are shorter and glandular; segments connivent, blunt, having glandular hairs only, the two outer the largest and broadest. *Corolla* purplish rose-coloured, yellow in the throat, covered as well as the calyx on the outside with glandular pubescence, the four larger segments nearly equal, spreading, flat, channelled in the centre, and slightly crisped on the edges, the two next the labellum rather the narrowest, and each having one erect, ovate, entire tooth at its base, of similar colour with the rest of the corolla, the two others green at their base on the outside, and furrowed in the throat, the groove with prominent, erect, pubescent edges; *labellum* deflected from the inside of the calyx between the lips, small, ovate, acute, yellow, with a purple, crisped, and crenate edge, its appendices blunt, spreading, and much shorter than itself; *tube* pale yellow, twisted, equal to the longest segments of the calyx, the whole of the inside and the upper surface of the limb presenting, under the microscope, a beautiful crystalline appearance. *Column* linear, flat, equal in length to the limb, dark red in front, yellow behind, glabrous, very irritable, bordered at its lower part. *Anthers* leaden-coloured, *pollen-granules* lilac, minute, ovate. *Stigma* of a dull green colour, oblong, glandular, surface crystalline. *Germen* ovate, bilocular, dissepiment imperfect above. *Ovules* very numerous, attached to a central receptacle, in the lower part of the dissepiment wanting.

This species has newly come into cultivation, and its flowers are larger than any in our gardens. I owe to the late Mr. Fraser, Colonial Botanist, a native specimen collected at King George's Sound, on the south coast of New Holland; and from seed taken off one that was sent at the same time to Mr. Macnab, the plant here described was raised. It blossomed in the greenhouse of the Royal Botanic Garden in May, and will continue to bear flowers during the early part of June. *Graham.*

Fig. 1. Front view of a Flower. 2. Back view of ditto.—*Magnified.*

3195.

W.J.H. delt

Pub by S. Curtis Glazenwood Essex Nov: 1 1832

Swan Sc.

(3195)

ACACIA RUSCIFOLIA. BUTCHER'S-BROOM-LEAVED ACACIA.

Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia, 10—200. *Legumen* continuum, exsuccum, bivalve.

Specific Character and Synonyms.

ACACIA *ruscifolia*; stipulis spinosis deciduis, phyllodiis verticillatis sparsisve ovatis ovato-lanceolatisve acutis mucronatis obscure 2—3-nerviis, mucrone recto pungente, spicis (cylindraceis) solitariis axillaribus pedicellatis, pedicello phyllodii dimidium æquante, ramulis marginibusque superioribus phyllodiorum cinereo-hispidis, floribus quadrifidis. *Cunningh.*

ACACIA ruscifolia. *Allan Cunningh. MSS.*

DESCR. A *shrub*, much branched in a straggling manner, the old branches terete, clothed with a brown, naked bark; the younger ones downy, with green prominent angles. *Leaves (Phyllodia)* horizontally patent, rarely solitary or in pairs, almost constantly verticillate, five or six in a whorl, linear-lanceolate, very harsh and rigid, terminated with a rigid spine, dark-green, entire, slightly pubescent, especially at the margin, which is thickened, furnished with a pale, on both sides prominent, midrib, and beneath besides with two obscure longitudinal nerves, scarcely observable but in the dried state. *Flowers* arranged in dense, solitary, axillary, oblongo-cylindrical, dense *spikes* of a full and bright yellow colour. *Calyx* very minute. *Corolla* cut almost to the base in five deep ovate segments. *Stamens* very numerous, yellow. *Anthers* rounded. *Pistil:* none in the flowers of the specimen here figured.

Communicated by W. T. AITON, Esq. from the Royal Gardens of Kew, in April, 1832, to which establishment it was introduced by Mr. ALLAN CUNNINGHAM, who discovered it on the rocky shores of Macquarrie Harbour, Van Diemen's Land, bearing fruit, in January, 1819. Its nearest affinity is with ACACIA *Oxycedrus* of SIEBER, from which it is distinguished by its broader, shorter, and more constantly verticillate leaves and shorter spikes of flowers.

Fig. 1. Flower. 2. Whorl of Leaves. 3. Single Leaf:—*magnified.*

3196.

W^m J. H. del^t

Pub. by S. Curtis Glazenwood Essex Mar. 1.1832.

DAVIESIA VIRGATA. TWIGGY DAVIESIA.

****

Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Calyx angulatus ebracteatus 5-dentatus interdum subbilabiatus. *Cor.* carina vexillo breviore. *Ovarium* pedicellatum dispermum. *Stylus* strictus. *Stigma* simplex. *Legumen* compressum angulatum elastice dehiscens ad suturam infer. dilatatum, fere semitrapezoideum. *Strophiola seminis* postice integra.—Frutices *Australasici glabri, spinosi aut inermes.* Folia *simplicia aut nulla.* Pedicelli *basi bracteolati axillares. D C.*

Specific Character and Synonyms.

DAVIESIA* *virgata;* foliis subspathulato-linearibus (uncialibus) verticalibus nervosis, mucrone innocuo apiculatis, margine crassiusculis, racemis axillaribus solitariis subquadrifloris folio triplo brevioribus basi bracteatis, ramis inermibus virgatis. *Cunningh.*

DAVIESIA virgata. *Allan Cunningham, MSS.*

DESCR. Frutescent. *Stem* erect, bearing many twiggy, alternate branches, which are green, angular, and slender. *Leaves* remote, alternate, erecto-patent, linear, obtuse, with a short mucro, attenuated at the base, but destitute of petiole, vertical, striated, one to two or three inches in length. *Flowers* small, in short, somewhat corymbose *racemes,* arising from the axils of the leaves, or from above the scar whence a leaf has fallen, much shorter than the leaves.

---

* Named in compliment to the Rev. HUGH DAVIES, a well-known Welch Botanist.

Pedicels slender, with a small, elliptical, obtuse, concave *bractea* at the base. *Calyx* bluntly five-toothed, teeth short, especially the upper one, red, as is part of the tube of the calyx, the rest green, quite glabrous: the teeth are fringed with a very minute, white down. *Vexillum* obcordate, with a short claw; externally rich reddish-brown with a yellow, dorsal line, internally bright orange-red, white, or yellowish-white in the centre, around which is a dark-red spot sending forth radiating lines. *Alæ* obliquely oval, with short claws, reddish, or chocolate-coloured. *Carina* deeply boat-shaped, obtuse, yellowish-white, at the extremity deep chocolate-coloured. *Stamens* free. *Filaments* white, scarcely shorter than the pistil. *Anthers* roundish, yellow. *Pistil* quite glabrous, red tinged with green at the base. *Germen* linear-lanceolate. *Style* subulate, obtuse.

This is another of the numerous interesting discoveries of Mr. ALLAN CUNNINGHAM, by whom it was introduced to the Royal Gardens at Kew, whence it was kindly communicated by Mr. AITON. It inhabits the more elevated, dry, barren parts of the Blue Mountains of New Holland, where it flowers in October. In the greenhouse at Kew its blossoming season is June. Mr. CUNNINGHAM observes, that it appears to be allied to D. *racemulosa* of DE CANDOLLE, and to D. *umbellata* of Sir J. E. SMITH; but that it is really distinct from both.

Fig. 1. Flower and a Bud. 2. Vexillum. 3. Alæ. 4. Carina. 5. Calyx, Stamens, and Pistil. 6. Pistil.

3197.

W. J. H. delᵗ

Pub by S Curtis Glazenwood Essex Nov 1 1832

Swan Sc.

SISYRINCHIUM MACULATUM. SPOTTED-FLOWERED SISYRINCHIUM.

****

Class and Order.

MONADELPHIA TRIANDRIA.

(Nat. Ord.—IRIDEÆ.)

Generic Character.

Spatha diphylla. *Perianthium* simplex, corollinum, profunde 6-partitum, æquale. *Filamenta* connata. *Stylus* simplex. *Stigma* trifidum. *Capsula* 3-locularis, infera.

Specific Name and Character.

SISYRINCHIUM *maculatum*; caule folioso ancipiti-compresso, foliis lineari-ensiformibus, pedicellis longitudine spathæ albo-membranaceæ acuminatæ, perianthii laciniis obovatis acutis, tribus macula magna atro-sanguinea, stigmatibus subulatis, ovario glanduloso.

DESCR. *Stem,* in our plant, scarcely more than a foot high, remarkably compressed, green, bearing four to five linear-ensiform, acuminated, striated, equitant leaves, the lower ones the longest, and about a span in height, all of them full yellow-green, scarcely at all scabrous. From the upper and shorter leaf arises a panicle of several *flowers,* three or four of which proceed together from a common spatha, only one however, flowering at once. *Spathas* lanceolate, conduplicate, green, with a broad, white, membranaceous margin, within which are a few membranaceous bracteæ. *Pedicels* equal in length with the spatha, or scarcely exceeding it. *Perianth* of six obovate and somewhat cuneated, acute, spreading segments of a full deep yellow colour, pale at the claws, and with a deep blood-red spot just above the claw; the three alternate ones with a large horse-shoe-shaped spot or cloud of the same hue occupying the whole width. The back of the segments of the perianth is of a paler colour, and the spots and clouds less distinctly marked. *Stamens* three, yellow. *Filaments* monadelphous. *Anthers* oblong, versatile. *Germen* inferior, broadly ovate, somewhat angled, glandular. *Style* shorter than the filaments of the stamens: *Stigmas* three, subulate, spreading.

A native of Chili, where, in the neighbourhood of Valparaiso, it was found by ALEXANDER CRUCKSHANKS, Esq. and by him introduced to the Glasgow Botanic Garden. It produced its bright and lively coloured flowers in May, 1832, being treated as other plants of the same Genus, in the greenhouse. Its nearest affinity is with S. *graminifolium* (Bot. Reg. t. 1067); but it is, with us at least, a smaller and less vigorous plant, the leaves are scarcely at all scabrous, the flowers larger, of a deeper yellow, and marked with dark blood-coloured spots, the spathas smaller, sharper, and more membranaceous at the margins.

Fig. 1. Flower, from which the Perianth is removed: *magnified.*

W.J.H del.

Pub by S. Curtis Glazenwood Essex. Nov 1 1832.

Swan Sc.

(3198)

ALTHÆA ROSEA. COMMON HOLLYHOCK.

* * *

Class and Order.

MONADELPHIA POLYANDRIA.

(Nat. Ord.—MALVACEÆ.)

Generic Character.

Calyx cinctus involucello 6—9-fido. *Carpella* capsularia monosperma in orbem disposita. *D C.*

Specific Character and Synonyms.

ALTHÆA* *rosea;* caule stricto, foliis cordatis 5—7-angulatis crenatis rugosis, floribus axillaribus sessilibus (v. breve pedunculatis) ad apicem subspicatis, petalis subcrenatis, unguibus villosis.

ALTHÆA rosea. *Cav. Diss.* 2. *t.* 29. *f.* 3. *Linn. Sp. Pl. p.* 966. *De Cand. Prodr. v.* 1. *p.* 437. *Spreng. Syst. Veget. v.* 3. *p.* 108.

DESCR. *Root* biennial. *Stem,* in our gardens, six to ten feet high, erect, stout, simple, more or less hispid with fasciculated, branched hairs. *Leaves* on rather short petioles, cordate, five to seven-lobed, the lobes angled, unequally serrated, upper-side dark green, slightly downy, beneath pale, more downy, with fasciculated *stipules,* large, unequally bifid. *Flowers* solitary, large, handsome. *Petiole* short. *Calyx* large, five-cleft, downy, striated, the segments acute. *Involucre* monophyllous, large, cup-shaped, six to nine-lobed, striated, downy, the lobes obtuse, often bifid. *Staminal tube* short. *Anthers* very numerous, pale yellow. *Germens* numerous, collected around

---

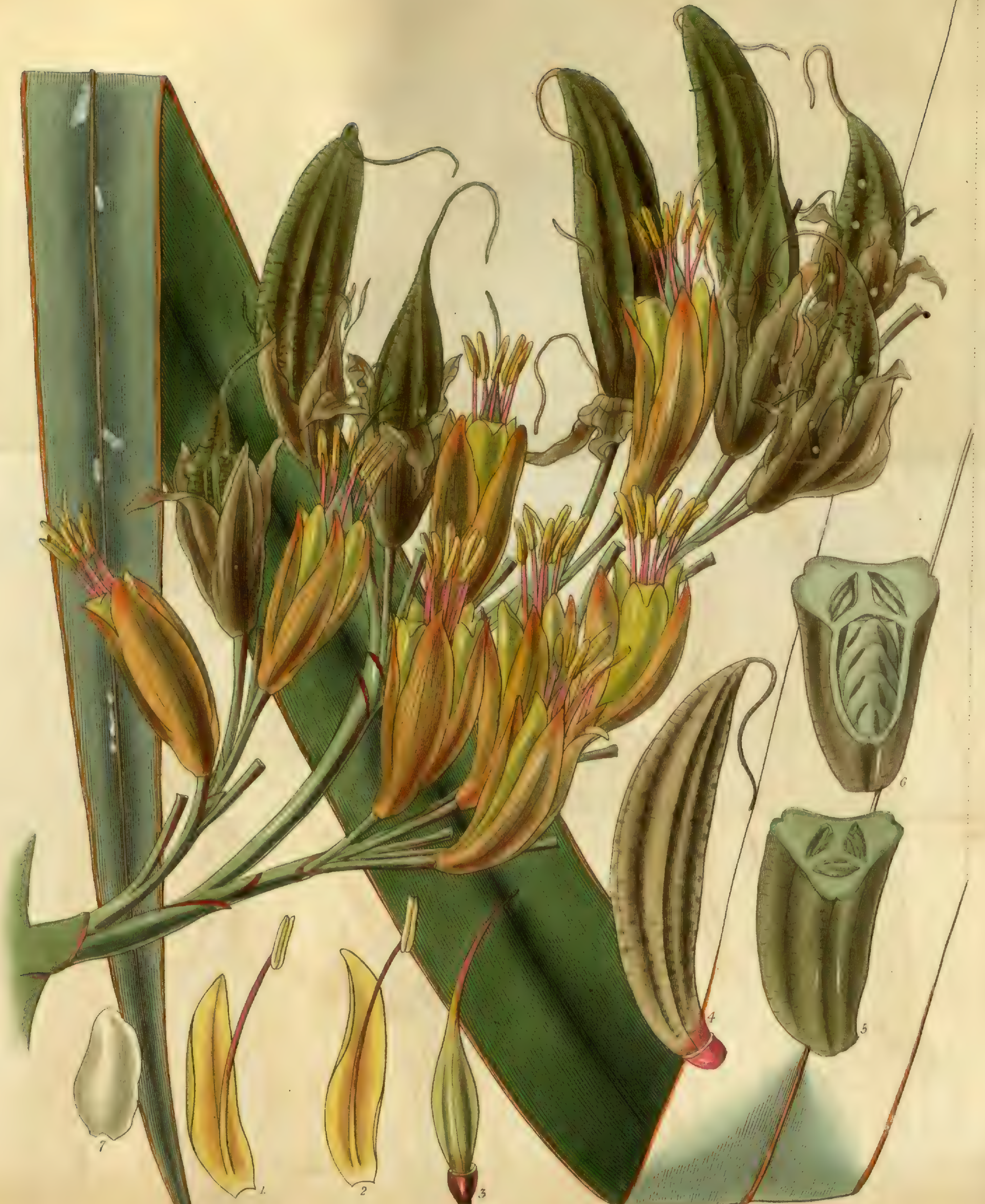
* From αλθω, to *comfort* or *cure;* from the healing qualities of plants of this tribe.

the dilated downy base of the *style*, which latter is cleft at the extremity into several segments. *Corolla* of five very broad, wavy, obcordate or somewhat cuneate *petals*, united at the base, in our gardens varying excessively in colour though generally inclining to rose-red, often with a pale eye or centre, surrounded with a deep black-purple ring.

A native of China; introduced in 1753, and now an universal inhabitant of the garden and shrubbery in all the temperate parts of Europe, where it is a hardy biennial and greatly admired for its stately growth, and the size and profusion and rich and varied colour of the blossoms, which continue to flower in succession from June till a late period in autumn. Hollyhocks succeed too in any soil, but no where perhaps so perfectly as in the vicinity of the sea.

Fig. 1. Young fruit.—*Natural size.*

3199.



(3199)

PHORMIUM TENAX. NEW ZEALAND FLAX.

****

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Perianthium profunde 6-partitum vel 6-phyllum, foliolis in tubum approximatis, interioribus longioribus apice patentibus. *Stam.* adscendentia erecta, 3 breviora receptaculo corollæ inserta. *Stylus* trigynus, stigmate trigono. *Capsula* oblongo-elongata, trigona, torta, trilocularis. *Sem.* numerosa, plana, margine membranacea. *Schult.*

Specific Name and Synonyms.

PHORMIUM* tenax. *Thunb. Diss. Nov. Gen. p.* 94. *Forst. Gen. n.* 24. *Prodr. p.* 325. *Cook, Voy. v.* 2. *p.* 96. *cum Ic. Thouin in Ann. du Mus. v.* 2. *p.* 228 *et* 474. *t.* 19. *St. Fond, v.* 19. *p.* 401. *t.* 20. *Redout. Liliac. t.* 448, 449. *Ait. Hort. Kew. ed.* 2. *v.* 2. *p.* 284. *Schult. Syst. Veget. v.* 6. *p.* 621. *Spreng. Syst. Veget. v.* 2. *p.* 76.

DESCR. *Root* fleshy, forming a somewhat tuberiform rootstock, creeping beneath the surface of the soil, and sending up many tufts of luxuriantly growing *leaves,* from four to eight feet long, and from two to four inches in diameter. They are distichous, vertical, coriaceous, deep green, somewhat glaucous beneath, finely striated, ensiform, the margin and nerve (especially at the back) are reddish-orange, at the base the inner edge has a deep furrow, which sheathes the leaf immediately within it, and upon various parts of the surface a gummy substance flakes off in whitish spots or scales. From the centre of these

---

* φορμος, a *basket,* in allusion to one of the uses made of the leaves of the plant, by the inhabitants of its native country.

tufts of leaves arises a *scape*, in the present instance "twelve feet in height and bearing thirteen branches, of which the lower ones contain about twenty *flowers*, and diminish gradually in number as they arise on the scape." These *flowers* are panicled and secund, ascending or pointing upwards, the *peduncles* and *pedicels* rounded, glabrous, often tinged with purple and sheathed with scales or *bracteæ*, margined with red. *Perianth* of six pieces or leaflets, approaching so as to form a tube, three outer and three inner, all united at the base, and of a lanceolate form, concave; the outer a dull brownish-orange, the inner a full yellow, a little longer than the outer, with their extremities patent. *Stamens* six, inserted each at the middle of the base of the segment of the perianth, and much exceeding it in length, three a little shorter than the other three. *Filaments* red above, yellow below. *Anthers* oblong, yellow, fixed by the centre of the back to the summit of the filament. *Germen* oval-oblong, greenish-brown, attenuated into a slender, triquetrous, red *style*. *Stigma* a mere point. The lower flowers of the branches seem to be very generally abortive and deciduous, breaking off at an apparent joint: the upper ones bear almost ripened capsules while many of the former are still in full flower: and these *capsules* are oblong, triquetrous, brown, and wrinkled, attenuated slightly at the base, and surrounded by the withered stamens and floral coverings, acuminated at the extremity, and terminated by the persistent but withered *style*, somewhat fleshy, three-celled; each *cell* bearing numerous, compressed, imbricated, and erect *seeds*, inserted upon the inner angle of each cell.

This highly useful plant is one of the many important discoveries, for which we are indebted to the late Sir JOSEPH BANKS; who says, in COOK's first Voyage, when speaking of the productions of New Zealand: "But among all the trees, shrubs, and plants of this country, there is not one that produces fruit, except a berry, which has neither sweetness nor flavour, and which none but the boys took pains to gather, should be honoured with that appellation. There is, however, a plant that serves the inhabitants instead of Hemp and Flax, which excels all that are put to the same purposes in other countries. Of this plant there are two sorts; the leaves of both resemble those of Flags, but the flowers are smaller, and their clusters more numerous; in one kind they are yellow, and in the other a deep red. From the leaves of these plants, with very little preparation, the natives make all their common apparel; and they also manufacture their strings, lines, and cordage for every purpose, which are so much stronger than any thing we can make with Hemp, that they will not bear a comparison. From the same plant, by another process, they draw long slender fibres, which shine like silk, and are as white as snow: of these, which are also surprisingly strong, the finer clothes are composed; while of the leaves, without any other preparation than splitting them into proper breadths, and tying the strips together, they make their fishing nets; some of which are of an enormous size. A plant, which, with such advantage might be applied to so many useful and important purposes, would certainly be a great acquisition to England, where it would probably thrive with very little trouble, as it seems to be hardy, and to affect no particular soil; being found equally in hill and valley, in the driest mould and the deepest bogs. The bog, however, it seems rather to prefer, as near such places we found it to be larger than elsewhere."

The seeds brought home by Sir **Joseph Banks** in 1771 did not succeed, but the *New Zealand Flax* was introduced to the Royal Gardens at Kew, through the medium of the same enlightened individual in 1789, and thence has been liberally distributed to collections in our own country and upon the continent. I possess flowering specimens in my Herbarium, which were produced in the Liverpool Gardens more than twenty years ago, the only instance that has come under my knowledge, except in the case of the individual plant now under consideration, which blossomed in June of the present year, in the greenhouse of **Joseph Boultbee**, Esq. of Springfield, Knowle, near Birmingham, who describes it, "though not as a brilliant, yet as a very handsome and magnificent plant." By Mr. **Aiton** it was sent to the garden of the Museum of Natural History of Paris in 1800: and in that country it has, as might be expected from the nature of the climate in many of the districts, been cultivated in the open air, and, for the first time, it produced flowers in the department of the Drôme, in 1812, but it bore no fruit. Messrs. **Labillardiere**, **Faujas de St. Fond**, **Desfontaines**, and **Freycinet**, have devoted much attention to the cultivation, and to the manufactory of this plant. It has even withstood the severe winters of Paris: but in the South of France it has been propagated with considerable success, and survived the winters without the smallest protection. In the departments of the west, particularly in the environs of Cherbourg, it has perfectly succeeded and yielded ripe fruit. It is readily increased too, by dividing the roots. M. FAUJAS DE ST. FOND, gives the following mode of preparing the fibre. He dissolves three pounds of soap in a sufficient quantity of water, together with twenty-five pounds weight of the split leaves of the PHORMIUM tied up in bundles. All are then boiled during the space of five hours, until the leaves are deprived of a tenacious gluten, and of the gum-resin above alluded to, but which is not removed by the ordinary process employed in the preparation of Hemp: after which they are carefully washed in running water.

From the experiments of M. LABILLARDIERE, the strength of the fibre of this plant, as compared with that of the *Agave Americana, Flax, Hemp,* and *Silk,* is as follows:—the fibre of the *Agave* breaks under a weight of 7; *Flax* of $11\frac{3}{4}$; *Hemp* of $16\frac{3}{4}$; *Phormium* $23\frac{7}{11}$; and *Silk* of 24. Thus it appears that of all *vegetable* fibre, that of *Phormium* is the strongest. It possesses too, this further advantage over Hemp and Flax, according to the French authors, that it is of a brilliant whiteness, which gives it a satiny appearance, so that the cloths made of it do not need to be bleached by a tedious process, or through those other means, by which the quality of Hemp and Flax is considerably injured.

There can scarcely be a question, seeing that the PHORMIUM *tenax* has succeeded remarkably well in the open air in Invernesshire, Scotland, (apparently in the neighbourhood of the sea,) without any shelter in the winter, and without even the protection of a wall, that the opinion expressed by Sir JOSEPH BANKS of the suitableness of the English climate to it, is well founded. Indeed, we know that the late —— YATES, Esq. of Salcombe, Devonshire, did cultivate this plant upon a rather extensive scale, and made preparations for converting it into thread, which his sudden death prevented him from carrying into effect. The south of Ireland would, in all probability be found to be well suited to its growth and increase.

I shall refer my readers to the authors already mentioned for many interesting details concerning the New Zealand Flax, and shall devote the remaining space to a relation of what has been kindly communicated to me for this work, by that very intelligent Botanist and Traveller, ALLAN CUNNINGHAM, Esq.

"The PHORMIUM *tenax* is indigenous to the islands of New Zealand. On the northernmost of the islands, which has been traversed almost in every direction, by Europeans, it is found in greater or less abundance, as well on the immediate coasts in low situations, subject to be overflowed by the tide, as in the inland country, generally in grounds more or less swampy.

"Extensively diffused as this valuable plant is over the surface of the island, it is along its western coast, to the southward of the parallel of 35°, and in Cook's Streight, that the greatest quantities have been found, where it is said to grow in fields of inexhaustible extent. The indigenous growth of the PHORMIUM is not limited simply to New Zealand; for it was long ago discovered in a wild state at Norfolk Island, where it forms long tufts, along the cliffs, within the influence of the salt spray rising from the heavy surfs, which, ever and anon, lash the iron-bound shores of that small, but truly beautiful spot of the Pacific.

"The preparation of the *Flax* for their own use, or for exchange with Europeans, is effected by the native women, and their method of separating the silky fibre, from the long Flag-like leaf of the plant, of which it forms the under surface, appears simple enough. Holding the apex of a *recently cut leaf* between their toes, they make a transverse section through the succulent matter at that end, with a *shell*, (which they still employ, though they possess every species of iron edge-tool,) and inserting the shell, (said to be of the Genus OSTREA,) between that substance and the fibre, readily effect its separation, by drawing the shell through the whole length of the leaf. It is to be observed, that the separation is always performed by those people, when the vegetable is freshly cut: as the leaf contains a gum, which causes the fibre to adhere more strongly, when dry; nor have the attempts of Europeans to extract the filaments from the leaf by maceration, been at all successful: the experiments that have been made at Sidney, showing that 'the large proportion of the succulent matter (for so the failure was accounted for) rendered it impossible to effect the separation by decomposition in water, without *materially injuring the strength* of the fibre.'

"Simple as appears this mode of separating the Flax from the leaf by a shell, in the hands of those savages, still the European has not succeeded in his endeavours to prepare the fibre for himself, either by *that*, or any other means that have been tried; nor has any instrument or piece of machinery yet been invented to enable *him* to strip off, and prepare this valuable filament for the English market. The Port Jackson traders must still be dependent on the native women and their shells for the cargoes they obtain!

"The Flax thus obtained from the natives by the merchants of Sidney, undergoes no heckling, cleaning, or other preparation, previous to its being shipped for the English market: but is merely made into bales, by being put in a press and screwed down. It is manufactured into every species of cordage, excepting cables, and Mr. BIGGE, the Commissioner of Enquiry to New South Wales, observes in his Report, pp. 52, 53, that 'its superiority of strength to the Hemp of the Baltic has been attested, both by experiments made at Sidney, and by one that was effected under his own observation in the King's Yard, at Deptford.'

"The relative proportions of strength of each, however, I have, I am sorry to say, not been able to obtain for you. A casual meeting, however, which lately took place between an old and experienced captain of a merchant-vessel and myself, enables me to give you some information on this point. He had been for thirty five years at sea, and many years in the trade between Liverpool and Mauritius; and from conversing upon sugar, Timor ponies, Torres Streights and coral reefs, we got upon the subject of *New Zealand Flax* and the rope it made, of which he spoke much in commendation, having employed it in the *ships he had commanded.* He had proved the superiority of the *New Zealand Flax* to Hemp in ropes, upon which there is always a great strain on ship-board; such as stays, braces, tacks, sheets, &c.; and such were the strength, elasticity, (hence its value for *stays*) and durability of the fibre of the New Zealand material, that it admitted of the ropes for such purposes, which had been manufactured of it, being of less dimension, and therefore more convenient to use than the same description of rope, to be appropriated to the same purposes, of Baltic Hemp, necessarily required. As a comment on this information of the Mauritius' captain, I will here briefly observe, that in one of our voyages, (Mermaid, with Capt. King) we bent a *new main-sheet* at Port Jackson, (which, in a cutter, is a rope on which there is ever much stress,) and after nine months, returned from the N. W. coast, and the rope was still good and serviceable; whereas, of Baltic Hemp, a main sheet, by friction and strain, would have been *so worn,* at the close of our survey on that coast, that it would have become indispensible to bend another to carry us back from that shore to Port Jackson, the voyage being seven or eight weeks.

"I have not heard that canvass has been made of it, but my correspondent (a merchant from Sidney, now in London) informs me, that a person has been trying it in table-cloths, napkins, &c. but with what success he was not aware.

"For many years past, has some communication been kept up by individuals residing at Port Jackson, with the natives of New Zealand; but it is only of late that the trade in Flax has been found to be a profitable speculation. Of this, the merchants of Hobart's Town and Launceston in Van Diemen's Land are now fully aware; and having had their attention turned to its advantages, they are beginning to prosecute it with ardour.

"I may here remark, that at the period (years ago) when the trade with this noble race of savages was first opened by persons of courage and enterprize at Port Jackson, axes, knives, and other edge-tools, together with beads and similar ornaments, were received by them with avidity; but now, they will hardly take any thing in exchange but *arms and ammunition.* With these last-named articles, the people are not at all likely to be satiated: there is no danger of there being a glut of muskets and gunpowder, to stop the trade in flax or Cowdie timber; but the arms must be of a superior, or at least a good quality: for, as Mr. Busby, in his paper on New Zealand, just published with other authentic information relative to New South Wales, justly observes, (p. 61,) Honghi, the late chief of the Bay of Islands' Tribe, could bring into the field five hundred warriors, all of the *aristocratic* or *free class,* armed with muskets; and so well are they now acquainted with the qualities of the latter, that a vessel, which lately took down two hundred, could not dispose of them on any terms, because the locks were only *single-bridled.* The same vessel sold a ton and a half of gunpowder, in exchange for Flax, in a few days, and would have had as little difficulty in disposing of the muskets, had they been of a better description. Although most of the chiefs can now muster a large force armed with muskets, their avidity to add to their armoury has undergone no diminution; and, with the exception of blankets, red woollen shirts and other warm clothing, tobacco, and sugar, scarcely any other article of English manufacture or merchandise has, as yet, any attraction for them.

"To what extent the trade in Flax has increased with these islanders of late, (say, since 1828,) some idea may be formed from the following facts. According to the statistical returns of New South Wales, for the year 1828, New Zealand Flax to the extent of sixty tons, and valued at £2,600, was exported from Sidney to England, during that year; whilst, during 1830, (according to the returns taken from the Custom-House books,) the quantities stated as the imports of it into Sidney for the English market were eight hundred and forty-one tons, and in 1831, one thousand and sixty-two tons. Its present price in London, my correspondent informs me, may be stated at from £15 to £25 per ton, much depending on its quality, and the clean manner in which it is brought into the market. Some doubts have been entertained by merchants, of this kind of trade with the New Zealanders being likely to continue. In reply to this doubt, my friend observes, that he, among others, considers it doubtful at present: for as the demand for the raw commodity, as introduced into the London market, is not considerable, and at the public sales of it there is but little competition, few houses having commenced to manufacture it, it may hardly fetch a remunerating price. But when its character has become more generally known, than it at present is, and its superiority to Baltic Hemp more fully ascertained by rope manufacturers in England, the demand for it will increase, and the price improving, will induce Sidney merchants, to hold out to the New Zealand chiefs such novel and costly temptations, in the way of trade, as would ensure the continuance of their exertions in preparing the *Flax* for them, in which it has been said they have rather relaxed of late, because they are determined to see what new articles of use or ornament we could offer them, that would be worthy of their acceptance, other than muskets and gunpowder.

"I will close my remarks on the subject of the PHORMIUM and the communication which *it*, and other indigenous productions of the soil of New Zealand have brought about, between its half-civilized inhabitant and the European, in the words of Mr. BUSBY, in the page just referred to. 'This intercourse (with commercial men) claims the attention of His Majesty's Ministers, from the advantage which could not fail to result from fostering and protecting a trade, that is calculated to open a very considerable demand for British manufactures, and to yield, in return, an article of raw produce, not only valuable to England as a manufacturing country, but indispensible to her greatness as a maritime power, and which the superiority of that power will always enable her to command, independently of foreign countries. And, apart from all motives of interest, it is deserving of attention from the opportunities it affords of civilizing and converting to Christianity, one of the most interesting races of people, which British enterprise has yet discovered in any quarter of the globe!'"

Fig. 1, 2. Outer and inner Segment of the Perianth with its Stamens. 3. Capsule, scarcely mature. 4, 5. Sections of the same. 6. Seed, *magnified.* —All but fig. 6, *nat. size.*

3200.

J. Curtis del.t

Pub. by S. Curtis, Glazenwood Essex Dec.r 1.1832.

Swan Sc.

CROTALARIA STRIATA. STRIATED-FLOWERED CROTALARIA.

****

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Calyx 5-lobus, subbilabiatus, lab. sup. bi- infer. 3-fido. *Corolla* vexillum cordatum magnum, carina falcato-acuminata. *Filamenta* omnia connexa, vagina sæpius superne fissa. *Stylus* lateraliter barbato-pubescens. *Legumen* turgidum valvis ventricosis inflatum, sæpius polyspermum, pedicellatum.—Herbæ *aut* frutices. Folia *simplicia aut palmatim-composita, 3- aut rarissime 5-foliolata.* Flores *sæpius flavi.* Bracteolæ *minimæ secus pedicellum aut ad basin calycis. D C.*

Specific Character and Synonyms.

CROTALARIA *striata;* stipulis nullis, foliis trifoliolatis foliolis ellipticis obtusis mucronatis subglabris, racemis terminalibus, bracteis setaceis marcescentibus demum deciduis, petalis omnibus striato-pictis, alis carina vexilloque duplo brevioribus.

CROTALARIA striata. *De Cand. Prodr. v. 2. p.* 131.

DESCR. A *shrub,* apparently of humble growth, with rounded, green *branches. Leaves* trifoliolate; *leaflets* elliptical, subglabrous, mucronate, about equal in length with the *petiole,* which is thickened at the base and destitute of *stipule,* unless, indeed, the *stipules* be early deciduous. *Racemes* elongated, terminal, or in the axils only of the upper leaves. *Bracteæ* small, setaceous, soon withering, brown, and at length deciduous. *Pedicels* short, recurved. *Flowers* numerous, drooping. *Calyx* campanulate, with five, rather long, lanceolate, acuminated teeth. *Corolla* thrice as long as the calyx, yellow; all the petals striated with deep, orange-brown lines. *Vexillum* broadly oblong, reflexed. *Alæ* oblong, subfalcate, acute, not half the length of the *carina*, which is equal in length with the vexillum and much acuminated.

Our figure is from a drawing made ten years ago, by Mr. JOHN CURTIS, from a plant in the collection of the late Mr. WALKER, of Arno's Grove, but unaccompanied with any remark. It is probably a stove plant, and a native of the Mauritius: at least, we have received specimens of what appears to be exactly the same species of CROTALARIA from that island, and communicated by M. BOJER, under the name of "C. *laburnifolia*;" but it is quite different from the plant of that name sent by Dr. WALLICH, and agrees in many respects with C. *bracteata* of ROXB. and DE CANDOLLE, and with C. *striata* of the latter author; both natives of the East Indies. I have referred it, but doubtfully, to C. *striata*.

3201.

J^s. Macnab del^t

Pub. by S. Curtis, Glazenwood Essex, Dec.^r 1 1832

S

PHYSIANTHUS ALBENS. WHITISH-LEAVED PHYSIANTHUS.

****

Class and Order.

PENTANDRIA DIGYNIA.

(Nat. Ord.—ASCLEPIADEÆ.)

Generic Character.

Cor. campanulata, tubo inflato-ventricoso, limbo 5-fido connivente. *Columna fructificationis* inclusa pentaphylla, foliolis tubo stamineo insertis, deinde corollæ adnatis, sursum liberis cucullatis. *Antheræ* membrana terminatæ. *Pollinis massæ* decem, cereaceæ, compresso-clavatæ, in cruribus retinaculi deflexis pendulæ. *Stigma* biapiculatum. *Semina* comosa. *Martius.*

Specific Character and Synonyms.

PHYSIANTHUS * *albens;* herbacea, volubilis, foliis oppositis integerrimis acutis basi cordato-truncatis subtus albo-pruinosis, floribus subdichotomo-cymosis. *Martius.*

PHYSIANTHUS albens. *Mart. Nov. Genera et Sp. Plant. Brasil. v.* 1. 54. *t.* 32. *Graham, in Ed. New Phil. Journ. Oct.* 1832. *Spreng. Syst. Veget. cur. post. p.* 112.

DESCR. *Root* woody, branched, and fibrous. *Stem* woody, (at least when cultivated in the stove,) round, branched, twining; *bark* green, cracked, and on the recent shoots, which are very long and slender, pretty densely covered with short, adpressed pubescence. *Branches* opposite and axillary, spreading. *Leaves* (three inches long, an inch and three quarters broad,) petioled, opposite, oblong, trun-

---

* *φυσος, a bladder,* and *ανθος,* a *flower,* from the inflated corolla.

cated below, undulate, entire, acute, deep green and pruinose above, paler beneath, and there especially clothed with minute pubescence. *Petiole* about one-third of the length of the leaf, of the same colour with the shoots, channelled above, spreading. *Peduncles* lateral, more rarely axillary, subdichotomously cymose, four- to eight-flowered, about as long as the petiole, and similar to it; *pedicels* (about seven lines long) spreading, straight. *Calyx* five-parted, green, very minutely tomentose, obscurely veined; *segments* ovate, acute, spreading below, erect in their upper half, reflected at the sides. *Corolla* faintly perfumed, somewhat fleshy, white, when in bud pale rose-coloured, hypocrateriform, glabrous: *tube* (half an inch long) one and a half times as long as the calyx, at its base ventricose, with five gibbosities and slightly hairy on the inside, above pentagonous, sides depressed, and having a ridge in the centre of the depression; *limb* (an inch and a quarter across) spreading, five-parted, *segments* ovate, acute, reflected at the apices and at the sides. *Crown* attached to the inside of the base of the tube, five-parted, *lobes* connivent, blunt, convex on the outside, alternate with the gibbosities of the tube, glabrous. *Stamens* opposite to the lobes of the crown, and twice as long as these, adpressed to the pistil; *filaments* coarse and fleshy, monadelphous, concave on the inside, flat on the out, sagittate above, terminated by a little ovate, subacute point, below the sides of which, and on the inside of the filament, are the cells of the anther; *pollen-masses* yellow, elliptico-ovate, flattened, reticulated. *Stigma* large, conical, angular, terminated above by two appendages longer than itself, which diverge below, meet above near the apices, and again diverge; *glands* alternate with the stamens, indented into the angles of the stigma, deep lilac, cartilaginous, slit vertically along their outer surface, terminated above by a cordate, brown process, emarginate at the apex, and below by two processes, which are brown, linear, flat, swollen at both their extremities, each becoming attached obliquely to the narrower extremity of a pollen-mass in the stamen next to it. *Styles* two, short, connivent above. *Germens* two, turgid, ovate, acute. *Ovules* very numerous, small, imbricated, filamentous, attached to the receptacle placed on the inside of the germen.

Seeds of this fine plant were received by Mr. NEILL from Mr. TWEEDIE, Buenos Ayres, in 1830, and climbing along the roof of the stove in his garden, flowered freely in August last. I possess from Mr. TWEEDIE an excellent specimen, in no respect different from the cultivated plant. *Graham.*

3202.

J. Macnab. del.

Pub. by S. Curtis Glazenwood, Essex Decr 1 1832

Swan Sc.

MANETTIA CORDIFOLIA. HEART-LEAVED MANETTIA.

****

Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—RUBIACEÆ.)

Generic Character.

Cal. 4—5-s. 8—10-partitus. *Cor.* tubulosa 4—5-fida. *Stam.* 4—5 fauci inserta. *Caps.* bilocularis. *Sem.* alata. *Spr.*

Specific Character and Synonyms.

MANETTIA* *cordifolia;* glaberrima, caule suffruticoso volubili ramis teretibus, foliis cordatis acuminatis utrinque nitidis, stipulis amplexicaulibus acuminatis, pedunculis axillaribus unifloris folio longioribus, calyce 4-lobo lobulis minimis interjectis, corolla fauce nudo dilatato.

MANETTIA cordifolia. *Mart. Specim. Mat. Med. Bras. v.* 1. *p.* 19. *t.* 7. *De Cand. Prodr. v.* 4. *p.* 363.

MANETTIA glabra. *Chamisso et Schlecht. Linn.* 1829. *p.* 169. *De Cand. Prod. v.* 4. *p.* 363.

DESCR. Whole plant glabrous. *Stem* suffruticose, much branched, very slender, round, twining; *bark* grey and exfoliating, on the young shoots green, glabrous, shining. *Leaves* (two inches long, one inch broad, but gradually smaller, and the uppermost about four lines long, two lines broad, while the low and largest on a vigorous cultivated specimen, are four inches long, and nearly two and a half broad) opposite, petioled, cordate, acuminate, glabrous on both sides, shining, pale, with prominent veins and obscure, minute, reticulations, below dark, and the veins slightly channelled above. *Stipules* small, subulate, and at length often reflexed in their upper half, bases broad and connate within the petioles, so as to form a small cup, which is occasionally toothed, round the branch. *Peduncles* elongated, solitary, glabrous, filiform, shining and single-flowered,

---

* Named in honour of XAVIER MANETTI, a Florentine Professor of Botany.

ered, at the extremities of the branches, which are subsequently elongated, rendering the peduncle axillary. *Calyx* green, glabrous, four-parted, with minute, divided intervening teeth; segments acute, at length reflected, one-nerved. *Corolla* (fully an inch and a half long, three lines and a half across the revolute limb,) very handsome, shining on the outer surface, and glabrous every where, except a little above its base on the inside, where for some distance it is densely clothed with inverted, white hairs; *tube* clavato-funnel-shaped, with four flat sides, nectariferous, and only colourless at the base, every other part of the corolla vermillion-orange coloured, deepest on the inner side of the limb, green in the young buds, throat dilated and naked; *limb* four-parted, segments deltoid, revolute. *Stamens* four, alternating with the segments of the corolla; *filaments* colourless, adhering to the tube throughout its whole length, the free portion slightly connivent, and rather shorter than the segments of the limb; *anthers* versatile, oblong, purple, inserted by their back, bursting along the front of the cells, which are distant in the middle, connivent at the extremities; *pollen* green. *Germen* inferior, green, compressed, bilocular, crowned by a white, depressed disk, which rises above the insertion of the corolla. *Style* rather longer than the stamens, exserted, colourless, filiform. *Stigma* green, blunt, of two, erect, parallel lobes. *Ovules* numerous, erect, on erect, free, columnar receptacles, one rising with each loculament from near the base of the dissepiment. *Capsule* ovate, compressed, channelled on both sides, crowned by the persisting, indurated calyx, bivalvular, bilocular, opening by a division of the dissepiment; valves boat-shaped, nerved, and each splitting into two teeth at the apex. *Seeds* brown, round, flattened, and surrounded by a membranous wing.

This truly beautiful plant, raised from seed sent by Mr. Tweedie from Buenos Ayres, first showed flower in the stove of Mr. Neill's garden, Canonmills, near Edinburgh, in August last. Another and stronger specimen is just now (10th October,) opening its first blossoms; and being covered with a profusion of buds in every stage, it promises to be exceedingly ornamental during many weeks. My native specimens, obligingly communicated by Mr. Tweedie, are from the woods of the Uraguay. The seeds were gathered on the banks of the Arroyo de la China, a stream which enters the Uraguay entre Rios. The dilated, naked throat of the corolla forms a remarkable exception to the Generic Character as drawn by Jussieu in Memoires du Museum 1820, p. 384, and the four-sided tube of the corolla with the connivent filaments are at variance with the Generic Character given by De Candolle, l. c.

Fig. 1. Calyx and Pistil. 2. Section of the Germen. 3. Stigma:—*magnified.*

3203.

W.J.H. delᵗ
Pub. by S. Curtis, Glazenwood, Essex, Dec. 1. 1832
Swan Sc

ACACIA INTERMEDIA. INTERMEDIATE ACACIA.

****

Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia, 10—200. *Legumen* continuum exsuccum, bivalve. —Frutices *aut* arbores *habitu et foliatione varia.* Spinæ *stipulares, sparsæ aut nullæ.* Flores *flavi, albi aut rarius rubri, capitati aut spicati, decandri aut polyandri, eleutherandri aut monadelphi, petalis 4—5-liberis coalitisve constantes.*—Sect. 1. PHYLLODINEÆ. *D C.*

Specific Character and Synonyms.

ACACIA *intermedia;* phyllodiis lineari-lanceolatis acutis basi attenuatis obscure bi- trinerviis, spicis cylindricis compactis, floribus quadrifidis, petalis reflexis, stylo staminibus duplo longiore. *Cunningh.*

ACACIA intermedia. *Cunningh. MSS. apud Hort. Reg. Kew.*

DESCR. The specimen here figured is from a shrub of strong growth, eight feet in height; much branched, the branches twiggy, of a rusty-brown colour, quite glabrous, (as is the whole plant,) bearing copious foliage, especially at the slender extremities. *Leaves* or *phyllodia* two and a half to three inches long, linear-lanceolate, attenuate at the base, acute at the extremity, of a full but yellowish-green colour, not at all approaching to glaucous, obscurely marked with three nerves, and with still more obscure, anastomosing veins. *Flowers* crowded, fragrant, arranged in rather long, slender, cylindrical, spreading, sessile, deep yellow spikes, shorter than the leaves. *Calyx* short, quadrifid. *Corolla* deeply quadrifid, the segments oblongo-ovate, rather obtuse, and reflexed at the apex. *Stamens* very numerous, twice the length of the corolla, and half the length of the filiform wavy *style*.

From the Royal Gardens at Kew, where it has been long cultivated among the plants that were the earliest introduced from New Holland: but which does not yet appear to have been taken up by any author. My friend, Mr. ALLAN CUNNINGHAM, has justly pointed out the ACACIA *floribunda*, WILLD. and VENT., Choix des Plantes, t. 13, and A. *mucronata*, WILLD. and WENDL., Diss. t. 12, as among its nearest allies :—but the former has longer leaves, much larger spikes, with exceedingly remote five-fid flowers, and a much shorter style ; and the latter has linear-spathulate leaves, with a rounded apex and a mucro, and lax flowers.

Fig. 1. Flower :—*magnified.*

3204.

W. J. H. del.

Pub. by S. Curtis Glazenwood. Essex. Dec.r 1. 1832

Swan Sc.

CALENDULA OFFICINALIS. COMMON MARIGOLD.

****

Class and Order.

SYNGENESIA NECESSARIA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum nudum. *Pappus* nullus. *Cal.* polyphyllus, æqualis. *Sem.* disci membranacea. *Willd.*

Specific Character and Synonyms.

CALENDULA * *officinalis ;* seminibus cymbiformibus muricatis omnibus incurvatis. *Willd.*

CALENDULA officinalis. *Linn. Sp. Pl. p.* 1304. *Willd. Sp. Pl. p.* 2340. *Ait. Hort. Kew. ed.* 2. *v.* 4. *p.* 166. *Spreng. Syst. Veget. v.* 3. *p.* 623.

(β.) flore pleno.

DESCR. *Root* annual, fibrous. *Stem* about a foot high, with many patent, dichotomous, or sometimes, trichotomous branches, striated, green, succulent, hispido-pubescent. *Leaves* oblong, acute, somewhat succulent, broad, and a little cordate at the base, the margins quite entire, often, as well as here and there upon the surface, hispid with short hairs. *Flowers* large, terminal, solitary upon each branch, of a rich, full golden yellow, deeper and brighter previous to their full expansion. *Involucre* of many nearly equal, appressed, linear-subulate, piloso-hispid *leaves* or *scales,* not one-third so long as the radiant florets, the apices a little recurved. *Corollas* of the *ray* ligulate, *female* tridentate, broadly linear, the lower tubular portion hairy. *Germen* singularly boat-shaped, curved like a horse-shoe, large, green, downy, within having a thickened margin, more or less tuberculated on the back. *Florets* of the *centre* all tubular, small, *male,* and, consequently, sterile; the mouth five-cleft, the base hairy. *Abortive Germen* cylindrical, downy, green. *Receptacle* dotted. The *heads* of *fruit* have a singular appearance: the centre or disk is occupied by the closely packed, abortive *pistils,* and surrounded by the numerous, large *achenia,* which constitute the circumference, and are cymbiform, with a broad, thickened margin, singularly incurved, within at the base having an elevated lamella, the back furnished with a tuberculated ridge: the inner of these achenia are more narrow, and have less margin.

---

* From *Calendæ,* the Calends, or the first day of every month, according to the Romans ; in allusion to its bearing a succession of blossoms for a very long period—*flower of every month.* In France it is called *Souci,* or *Solsi,* altered, according to THEIS, from *solsequium, to follow the course of the sun.*

This well-known and truly brilliant ornament of our gardens, even of that of the humblest cottager, has, strange to say, never found a place in any of our periodical Magazines. It is too, a very old inhabitant of our flower-borders, having been introduced so long ago as 1573, from the South of Europe: and is now frequent in the gardens even of the peasantry. LINNÆUS observed, that its flowers usually expanded from nine in the morning till three in the afternoon; but SHAKESPEARE seems more correct when he calls it

> "The *Marygold* that goes to bed with the sun,
> And with him rises weeping."

The flowers, which vary much in intensity of colour, and in being more or less double, were formerly, and are still, used in some parts of England, to impart an agreeable colour and peculiar flavour to soups and broths, and have been considered as "comforters of the heart and spirits:" and a distilled water, and a kind of vinegar and a conserve have been prepared from them.

Fig. 1. Central male Floret. 2. Male ligulate Floret of the Circumference. 3. An outer Pericarp of the Head of Fruit:—*magnified.*

W. J. H. del.

Pub. by S. Curtis Glazenwood, Essex, Decr 1. 1832.

Swan Sc.

MENTZELIA HISPIDA. HISPID MENTZELIA.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—LOASEÆ. *Juss.*)

Generic Character.

Cal. persistens, tubo cylindraceo sub 5-sulcato, lobis 5 lanceolatis subulatisve æqualibus. *Petala* 5 summo calycis tubo inserta æqualia. *Stamina* plurima petalorum numero multiplicia cum iis inserta, filamentis liberis sæpé in phalanges dispositis, *antheris* erectis ovatis bilocularibus. *Ovarium* calycino tubo adnatum. *Styli* 3 ad medium aut ad apicem in unicum striis tribus notatum connexi. *Capsula* turbinato-cylindracea, calycinis lobis coronata, 1-locularis, apice 3-valvis. *Semina* 3, 6, 9, aut abortu ab iis numeris subdiscrepantia, placentis 3 parietalibus inserta.—Herbæ *ramoso-dichotomæ, pilis barbatis aut glochidiatis rigidis asperæ.* Folia *alterna aut subopposita exstipulata grossè dentata.* Flores *flavo-aurantii, in dichotomiis solitarii subsessiles, aut, ramo uno abortivo, pseudo-axillares, sole ferventi expansi.*

Specific Character and Synonyms.

MENTZELIA* *hispida;* petalis obovatis mucronato-acuminatis calyce longioribus, staminibus 30—35, quorum 10 ext. majoribus, foliis floralibus sessilibus.

MENTZELIA hispida. *Willd. Sp. Pl. v.* 2. *p.* 1176. *Juss. Ann. du Mus. v.* 5. *p.* 24. *De Cand. Prodr. v.* 3. *p.* 343. *Spreng. Syst. Veget. v.* 2. *p.* 601.

MENTZELIA aspera. *Cav. Ic. v.* 1. *p.* 51. *t.* 70. *(excl. syn.) Hook. in Bot. Misc. v.* 2. *p.* 220. *(excl. Syn. Linn.)*

DESCR. *Stem* herbaceous, erect, branched in a dichotomous manner, clothed with a pale, whitish, shining *bark,*

---

* In compliment to C. MENTZEL, a Botanical Author of Brandenburg.

which easily peels off, and is rough to the touch, and, on the young branches, rough with hairs. *Leaves* opposite, ovate, shortly petiolate, deeply and very irregularly serrated, often angled, rough on both sides with harsh, rigid hairs. *Flowers* solitary, large, terminal upon the branches, or axillary in the dichotomies. *Calyx* with its tube adherent with the germen, rough with hairs, the five segments lanceolate, reflexed. *Petals* five, broadly ovate, acuminulate, deep, rather fulvous yellow, patent. *Stamens* numerous, the ten outer ones the largest. *Filaments* slender, yellow. *Anthers* rounded. *Germen* roundish, oblong, inferior. *Style* filiform. *Stigma* obtuse. Immature *capsule* oblong, crowned with the style and the reflexed segments of the calyx, very rough; according to CAVANILLES about six-seeded.

Seeds of this plant were sent to the Glasgow Botanic Garden from Yazo, in the valley of Canta, Peru, by Mr. CRUCKSHANKS, and the plant produced flowers in April, 1832. When noticing this species, from the dried specimens communicated to me by the same traveller, in the Botanical Miscellany above quoted, I was led to refer it to the MENTZELIA *aspera* of LINNÆUS, and I am now far from certain that authors have done right in separating the two, the differences appearing to me to rest on very slight grounds. I there likewise mentioned, that the M. *oligosperma* of North America, seemed to me to be scarcely different from the present. Its flowers are smaller, more tawny, and the seeds are described as two or three in each capsule.

CAVANILLES and DE CANDOLLE give our plant as an inhabitant of Mexico, where it is called *Zazale.* Its powdered roots are violently purgative and used medicinally.

Fig. 1. Flower, not fully expanded. 2. Petal and Stamens. 3. A long and a shorter Stamen. 4. Pistil. 5. Immature Capsule.—*Magnified.*

INDEX,

In which the Latin Names of the Plants contained in the *Sixth* Volume of the New Series (or *Fifty-Ninth* of the Work) are alphabetically arranged.

Pl.
3174 Acacia cinerascens.
3203 ——— intermedia.
3195 ——— ruscifolia.
3171 Acrotiche ovalifolia.
3186 Æchmea Mertensii.
3192 Alpinia magnifica.
3198 Althæa rosea.
3181 Andromeda tetragona.
3129 Anthericum semibarbatum.
3177 Arbutus pilosa.
3142 Arthrostemma nitida.
3193 Astragalus alopecuroides.
3160 Bæckea saxicola.
3155 Bidens striata.
3204 Calendula officinalis.
3187 Calochilus campestris.
3141 Cerasus sphærocarpa.
3125 Cereus Royeni.
3137 Cleome gigantea.
3165 Clitoria ? arborescens.
3166 Coccoloba pubescens.
3130 ——— uvifera.
3158 Couroupita Guianensis.
3159 Ibid.
3200 Crotalaria striata.
3196 Daviesia virgata.
3156 Diuris maculata.
3143 Doronicum Caucasicum.
3168 Epacris onosmæflora.
3151 Epidendrum variegatum.
3126 Eriocaulon decangulare.
3180 Eriostemon myoporoides.
3178 Francoa appendiculata.
3131 Geitonoplesium cymosum.
3124 Geranium albiflorum.
3134 Gratiola tetragona.
3133 Grevillea Caleyi.
3185 ——— canescens.
3184 ——— robusta.
3164 Habenaria cordata.
3170 Helleborus purpurascens.
3183 Hibbertia Cunninghamii.

Pl.
3144 Hibiscus Genevii.
3152 ——— Manihot, β.
3163 Hymenanthera dentata
3123 Lathyrus decaphyllus.
3162 Leucopogon lanceolatus.
3140 Lilium tenuifolium.
3147 Lissanthe sapida.
3138 Lobelia robusta.
3202 Manettia cordifolia
3154 Maxillaria picta.
3173 ——— placanthera.
3146 ——— tetragona.
3176 Menziesia empetrifolia.
3205 Mentzelia hispida.
3128 Michauxia lævigata.
3157 Mimusops dissecta.
3153 Myrcia acris.
3189 Œnothera speciosa.
3179 Ornithogalum corymbosum.
3175 Pæonia officinalis, *var.* anemoniflora.
3199 Phormium tenax.
3201 Physianthus albens.
3132 Piper Betle.
3139 —— nigrum.
3161 Pittosporum cornifolium.
3145 Polygonum adpressum.
3167 Primula Sibirica.
3172 Pterostylis Banksii.
3149 Rosa Kamtchatica.
3182 Rülingia corylifolia.
3135 Salvia strictiflora.
3150 Sida rosea.
3197 Sisyrinchium maculatum.
3136 Stylidium scandens.
3194 ——— hirsutum.
3188 Symphytum Caucasicum.
3191 Tecoma Stans.
3148 Thea viridis.
3190 Tropæolum pentaphyllum.
3169 ——— tricolorum.
3127 Verbena venosa.

INDEX,

In which the English Names of the Plants contained in the *Sixth* Volume of the New Series (or *Fifty-Ninth* of the Work) are alphabetically arranged.

Pl.
3195 Acacia, Butcher's broom-leaved.
3174 ——— grey, fragrant.
3203 ——— intermediate.
3171 Acrotriche, oval-leaved.
3186 Æchmæa, Mertens'.
3192 Alpinia, magnificent.
3181 Andromeda, four-sided.
3129 Anthericum, half-bearded.
3177 Arbutus, hairy.
3142 Arthrostemma, shining.
3160 Bæckea, stone.
3155 Bur-marigold, striated-flowered.
3187 Calochilus, Field.
3125 Cereus, Van Royen's.
3141 Cherry, Noyau.
3137 Cleome, gigantic.
3165 Clitoria, woody.
3153 Clove-tree, wild, or Bay-berry Myrtle.
3188 Comfrey, Caucasian.
3158 Couroupita, Guiana, or Cannon-ball tree.
3159 Ibid.
3124 Crane's-bill, white-flowered.
3200 Crotalaria, striated-flowered.
3196 Daviesia, twiggy.
3156 Diuris, spotted.
3168 Epacris, Onosma-flowered.
3151 Epidendrum, variegated.
3180 Eriostemon, cuspidate.
3189 Evening Primrose, large white-flowered.
3123 Everlasting Pea, ten-leafletted.
3199 Flax, New Zealand.
3178 Francoa, appendiculated.
3131 Geitonoplesium, cymose.
3133 Grevillea, Blechnum-leaved.
3184 ——— gigantic.
3185 ——— hoary.
3164 Habenaria, heart-leaved.
3134 Hedge-hyssop, four-sided.
3170 Hellebore, purplish.
3183 Hibbertia, Mr. Cunningham's.
3144 Hibiscus, large purple-eyed.

Pl.
3152 Hibiscus, palmated-leaved, *var. β.*
3198 Holyhock, common.
3163 Hymenanthera, tooth-leaved.
3190 Indian-cress, five-fingered.
3169 ——— three-colored.
3143 Leopard's-Bane, Caucasian.
3162 Leucopogon, lanceolate.
3140 Lily, slender-leaved.
3147 Lissanthe, esculent.
3138 Lobelia, thick-stemmed.
3202 Manettia, heart-leaved.
3204 Marigold, common.
3173 Maxillaria, flat-anthered.
3146 ——— four-cornered.
3154 ——— painted.
3205 Mentzelia, hispid.
3176 Menziesia, crow-berry-leaved.
3128 Michauxia, smooth.
3193 Milk-Vetch, Fox-tail.
3157 Mimusops, cut-flowered.
3175 Pæony, common, *var.* of the anemone-flowered.
3132 Pepper, Betel.
3139 ——— black, or common.
3201 Physianthus, whitish-leaved.
3126 Pipe-wort, ten-angled.
3161 Pittosporum, Cornel-leaved.
3172 Pterostylis, large-leaved.
3145 Polygonum, berry-bearing, or Macquarie-harbour grape.
3167 Primrose, Siberian.
3149 Rose, Kamtschatka.
3182 Rülingia, nut-leaved.
3135 Sage, erect-flowered.
3166 Sea-side Grape, downy, or great-leaved, Leather-coat tree.
3130 Sea-side Grape, round-leaved.
3150 Sida, reddish globe-flowered.
3197 Sisyrinchium, spotted-flowered
3179 Star of Bethlehem, Peruvian.
3194 Stylidium, hairy.
3136 ——— climbing.
3148 Tea, green.
3191 Tecoma, Ash-leaved.
3127 Vervain, strong-nerved.